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News

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OCTOBER 1948



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BUTANE-PROPANE

News

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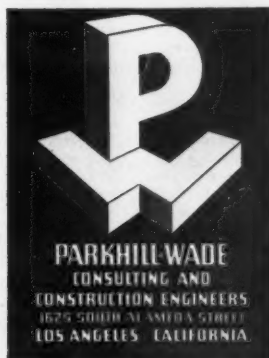
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L. P. G. Storage Systems
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Bus, Truck
and Tractor Conversions**

and

**SPECIAL LIQUEFIED PETROLEUM GAS
APPLICATIONS**



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LETTERS

- **BUTANE-PROPANE News** welcomes communications from those identified with the liquefied petroleum gas industry, but readers will understand that this magazine does not necessarily concur in the personal opinions so expressed.—Editor.

Gentlemen:

We are interested in knowing if there is a handbook that will give us the number of inches of liquid propane in any given size tank. For instance, a 24-in. tank is 83% full of liquid at 18½ in., approximately. But we do not know where to get a handbook to work it out.

Malvern, Pennsylvania

C. S.

We do not know of any reference book that will give you the number of inches of liquefied petroleum gas in any given size tank. However, we hope to publish such curves in BUTANE-PROPANE News in the near future. They have not yet been prepared.—Ed.

Gentlemen:

Will a 60-40 Butane Propane mix, at a temperature below plus 32 degrees or say plus 10 degrees, gasify all the liquid, or, will only the propane gasify, leaving the Butane? If it all gasifies, will the Butane content condensate in the line if it is at the same temperature as above?

On an underground Butane system, can drips be put in the line between the regulator and the house appliances without infringing on any patents? If you cannot answer this question, where can I secure this information?

Seattle, Washington

F. F. H.

At the temperature of plus 10°, the gas coming off will contain more propane than butane, although they will tend to come off together. In that mixture, there will be some condensation in the line.

A 60-40 mix would probably not be a satisfactory blend to be used at 10° above zero. However, it could be used if the butane and propane were taken off in the liquid form, vaporized, and the pressure reduced to near atmospheric. Naturally, the solution is to use a higher percentage of propane.

As far as we know, you would not be infringing on any patents in placing drips on the line between the regulator and the house appliances, but you should not take an opinion upon that matter, but make a search of patents covering such matters.

However, we do not believe it is good practice to use drips under such conditions inasmuch as when the temperature raises your pressure would be unduly heavy on that end of the line. Again the answer is use a higher percentage of propane.—Ed.

Gentlemen:

Is there a first and second grade propane gas? If so, what is the content of both?

V. W. S.

Gunnison, Colorado

There are no different grades of propane or other liquefied petroleum gases. This fuel is usually a blend of propane, butane and isobutane, in such proportions as climatic conditions dictate. In places of low winter temperatures a higher percentage of propane is used so that vaporization will result more easily.—Ed.

Gentlemen:

Please advise where we can get the specifications and regulations concerning liquefied petroleum gas equipment required by Underwriters Laboratories.

T. P. E.

Lakeland, Georgia

If you will address the National Board of Fire Underwriters, 85 John St., New York City, they will be glad to send you a copy of rules and regulations covering the handling of LPG and equipment.—Ed.

Gentlemen:

We are writing you in regard to making a connection for a mixture of butane-propane gas to be shipped in tank carload lots. Please advise the addresses of refineries.

E. C. M.

Pasco, Washington

If you will write to the refining companies whose advertisements appear in BUTANE-PROPANE News you will get the desired information.—Ed.

Gentlemen:

We frequently recommend the installation of relief valves on cylinders in the transportation of hydro-carbon gas (LPG). We would appreciate your informing us of the recommended practice of using spring valves as against fusible plugs.

S. J. S.

Philadelphia, Pennsylvania

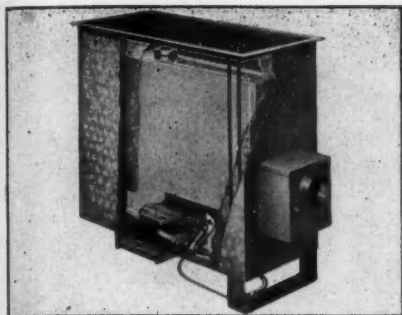
Both safety valves and fuse plugs are in general use. ICC containers with spring-loaded valves can be shipped at this time. A combination of a small fuse plug and a relief valve is good practice in small containers. On large tanks the codes call for safety valves.—Ed.

USE OUR RESEARCH DEPARTMENT

The BUTANE-PROPANE News technical staff will gladly endeavor to answer all legitimate inquiries (except legal and financial) about the LPG industry which regular subscribers submit.—Editor.

5 *Features of*

BRYANT FLOOR FURNACES



Here's a Floor Furnace with features that give you an "edge" in this good market:

- Cast iron individual raised port burners of standard Bryant design.
- Thermostatic pilot of complete shut-off type.
- Pilot and burner combustion can be observed without removing floor grill.
- Welded steel heating element of 12- and 16-gauge steel.
- Completely factory assembled and wired with exception of draft hood and gas pressure regulator.

Ask your Bryant distributor to show how these Bryant features will help you sell more floor furnaces.

THE BRYANT HEATER COMPANY

17825 St. Clair Avenue • Cleveland, O.





FOR EVERY LPG NEED!

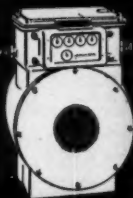
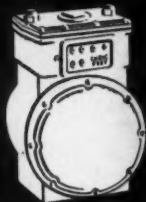
at the HIALEAH PARK PLANT...

Five propane gas cylinders with a total capacity of 2100 lbs. are required to handle the load adequately at Hialeah Park's clubhouse and grandstand kitchen. METRIC-AMERICAN Ironcase Meters of the LPG type are installed here, as in almost innumerable kinds of other bottled gas applications the country over . . . wherever it is desired to satisfy individual gas characteristics and requirements with the correct, dependable metering facilities.

GENERAL OFFICES • 40 EAST 42ND STREET, NEW YORK, N. Y.

AMERICAN METER COMPANY

INCORPORATED (ESTABLISHED 1936)



MAINLY BEYOND THE MAINS

SELL—OR ELSE!

Once in a while someone asks us the leading question — do these distributors and dealers in LPG actually step out and merchandise appliances, or are they chiefly concerned with the gas load that they can build up? Our answer to that one is easy. They either become good merchandisers in quite a hurry, or they don't stay in the LPG business long enough to worry any about the gas load that they might handle.

Every now and then the old established public utilities like to indulge in the easy-going pastime of doing nothing about appliance sales. And they are able to get away with it; because some additional load is likely to fall into their laps for no other reason than that the service is available, and the public in general has been sold on its convenience and necessity.

The LPG man starts out at scratch, if he is lucky, or in the shadow of the eight ball if he isn't. All he sees around him is a sea of prospects who have been cooking and water heating and perhaps refrigerating for years with competing fuels. And don't let's kid ourselves — people can cook very nicely with coal and wood, just as they can refrigerate with electricity. They don't even know that their system is unsatisfactory until someone tells them about the better way.

The dealer can't sell a single prospect a gas installation unless someone sells that same prospect the appliances to burn his gas; and he can't sell a single appliance unless someone sells the gas to operate it.

The result is that practically every installation made is a combination sale of gas service and gas appliances, and one man does it all, or the sale isn't made.

"Root hog, or die" is a homely and sometimes ominous warning, yet it applies to every kind of selling activity. The LPG dealer learns his lesson and he learns it fast. That's one reason that the use of butane and propane for cooking increased 50% in a year, while electricity was increasing 10.3 and gas 2.2%. And it is the reason that range manufacturers reported a gain of 58.6% in the number of stoves sold for use with LPG.

Maybe when the ten million rural homes now using inferior fuels are all converted to butane or propane, our industry will have a chance to lean back and relax a little. But right now there isn't time for such luxury. It's selling or else!

WHEN TO LOCK THE BARN DOOR

Any refiner, distributor or dealer in the LPG industry who is still nursing along the illusion that he can lone-wolf it through the critical days that lie ahead of his business is in a position that is just about as secure as that of Holland and Belgium on the night before May 10.

The blitzkrieg is on, and the competing interests, the electrical industry, and the politicians, are all uniting in an unholy alliance to see to it that the phenomenal expansion of this new service to American homes is arrested in its tracks, or taxed for all the traffic will bear.

Within the past few weeks restrictive local ordinances have appeared in such widely separated places as Seattle, Wash.; Petaluma, Calif., and Marfa, Texas. Without taking the space to analyze these in detail it can be said of them at best they are hastily conceived, and at the worst they are maliciously drawn. Seattle rules that no LPG may be handled, kept stored or used in any place of habitation other than a residence, within certain districts. Petaluma leaves no doubt as to its civic intention when it provides that: "The installation of liquefied petroleum gas for domestic use is prohibited in this city."

Of the Marfa, Texas, ordinance, a dealer there writes "... if the city succeeds in enforcing this ordinance I shall be forced to quit business. ... If you have in your files records of similar cases, please let us know in what manner they were settled. Any assistance you could render ... would be deeply appreciated, I assure you."

We have said in the past, and we repeat, that the time to fend off unfavorable legislation is before it goes on the statute books. And the only way this can be successfully done is through an alert membership in an enlightened and far-seeing association.

The Liquefied Petroleum Gas Association is rendering every assistance possible, to both members and non-members who find their business confronted with the possibility of inimical legislation. But the temper of local legislative bodies is such that they are not greatly impressed by long range suggestions such as the Association may offer. The only kind of influence that they understand is hard-hitting, politically-shrewd local resistance. And that resistance to be effective must make itself felt before new laws are passed, not after.

Local dealers or distributors must keep themselves informed of proposed legislation; and they should communicate the text of such proposals to the offices of the L. P. G. A. Only in this way can they receive any help from the organization at the time when that help may do some good. It goes without saying, too, that the local operators should in their own interest, be members of the association that is being asked to help fight their battle.

The Future of the LPG Industry Lies In Market Opportunities

By GERALD E. STEDMAN

The Bastian-Blessing Company, Chicago

LAST year, as contributing editor of a national appliance magazine, I wanted a county map showing the gas meter census of the country upon which to base certain market projections. When finished, the fact was amazing that there were so many counties of the country that had less than 25 meters per one hundred families. It vividly indicated the scope of the non-gas market which is open to liquefied petroleum gas service or, too long dallied with, vulnerable to the extension of rural electrification.

The map on the following pages shows there are 1021 counties of these great United States that can be considered as non-gas areas. In them, over 8,000,000 families reside; wanting the same urban comforts as their city cousins. The most reliable data shows that approximately 800,000 liquefied petroleum gas installations of varied forms have been domestically installed. In other words, the market is now about 10% saturated and,

therefore, is at its threshold of expansion.

If you will study the marketing economics of any industry—automotive, refrigerator, washing machine, or others—you will find that its swaddling period (pioneering) strung on until a 10% saturation had been reached. In this period, product, policies, plans and programs have tended to be unsettled and susceptible to violent shifts. But at the 10% point, everything has seemed to have become settled enough to permit that industry to stride forward profitably and assuredly to tremendous sales acceleration. A sufficient public following had been built up to kindle the desire on the part of others. The products and use technique had been reliably developed. The methods of sales and service had been properly developed to the point where, like a forest fire in a brisk wind, a conflagration of expansion sales has resulted. This is the situation in the liquefied petroleum gas industry now.

Industrial Uses Increase

It can be interpolated that the nationwide distribution of the lighter hydrocarbons and the technical engineering that has developed such effective uses of them for industrial purposes such as metal cutting, adds



G. E. STEDMAN

The Liquefied



Map, copyright by American Map Co., Inc., New York, No. 10,000-A, upon which G. E. Stedman, of The Bastian-Blessing Co., Chicago, has superimposed the results of a survey of gas users, as explained in the accompanying legend. Map and survey data released through special arrangement with above companies to BUTANE-PROPANE News, 1709 W. Eighth St., Los Angeles.

Refined Petroleum Gas Market



OCTOBER-1940

an important fraction of saleability that further enriches the market opportunity. It is, therefore, both a domestic and an industrial opportunity.

The fact that no one is doing an educational campaign individually or as an association shouldn't bother too much. Home appliances are products which have to be sold. For them, advertising creates an acceptance but not a demand. It takes sales activity, the personal persuasiveness of an earnest salesman, to flower such acceptance into a name on a dotted line. The industry's destiny rests with salesmen.

The factors of the industry have not yet learned how to live together. After all, the industry is peculiar in that it sells a service or a process in

ness to lay out educational funds to build a permanent market that there should. From the standpoints of both factors, therefore, it cannot be expected that any broad-gaged appropriation will be made available soon to teach Mrs. Rural America the delights of LP gas service.

What is needed, then, to capture this great opportunity? I would front the requirements with the declaration that the right type of thinking is preeminently essential. That type of thinking that concerns itself with the market opportunity, rather than with competition; that is interested in the manufacture of customers for a service rather than the sale of a product; that dares to change rather than to submit to conditions; that ploughs

TEN MILLION FAMILIES NEED GAS

Ten million families in the United States live beyond city gas mains and burn wood or coal, stove oil or corn cobs. They are legitimate prospects for a better fuel.

The map on the preceding pages shows graphically the great potential market for LPG. Actually, the market is larger than appears at first glance because even in the black and shaded areas are thousands of prospects. This tremendous territory, with its opportu-

nity for sales and profits in propane and butane gases, and the appliances and equipment essential to their use, is a challenge to the entire industry.

The season is open now. No fences or "keep out" signs are posted. At hand is a new buying year, with larger earnings by an increased number of workers. The best product, presented by the most aggressive staff of sales people, will reap the harvest. Will you get your share?

which gas and equipment combine. In that it cannot be compared with refrigeration, as an example. Only a product is involved in the latter, the current having already been sold and available. The building of the liquefied petroleum gas industry requires a liaison between the gas interests and the equipment interests to the point of making this modern service available. There hasn't been the willing-

evangelistically ahead in the realization that a service is being rendered far greater than its cost. With that sort of pervading thinking, the only other requirement is manpower that is trained and inspired to see the greatest number of people and tell the most persuasive story of the goodness of liquefied petroleum gases and equipment, framed to the needs and comforts of the individual prospect.

Salesmen Must be Paid

But How Much? It's the Way a Dealer Hires, Trains and Compensates His Men That Makes His Business Go.

MANY a dealer starts out in the bottled gas business filled with enthusiasm, enjoys good and growing



B. D. GEROY

business up to a certain point and then hits a dead level above which he can't seem to rise. Investigation shows that his territory contains a vastly larger potential market than he has touched; his finances are in satisfactory shape; and he is really

trying his best to increase his business. Yet nothing happens! Why?

In a surprisingly large number of such cases, the same condition stands out as the reason for the trouble. It's inability to build the right kind of a sales force.

Then there's another type of dealer, whose business may be growing, but who finds that sales cost is out of line to such an extent that increasing volume isn't bringing him the kind of profit it should. His complaint is nearly the same, and the same kind of treatment is indicated.

This treatment consists of completely overhauling the method of hiring, training and paying his salesmen.

- **B. D. GEROY**, general manager of the Illinois Bottled Gas Co., Chicago, past Chairman of the Mid-West Section and currently vice president of the Liquefied Petroleum Gas Association, has long promised us an article which might be of interest to the entire industry. As one of the pioneers in the liquefied petroleum gas business, he has absorbed an unusual amount of knowledge of all its phases. Not only that, but his company has shown remarkable growth and earning records—now well over a million dollars in sales per year—which places it among the largest independent operators. It is from the background of this experience and success that, at last, Mr. Geroy has drawn the facts in the accompanying article on hiring, training and paying salesmen.—Editor.

To begin with, there's the problem of finding a salesman. All too many times this is done by "making a place" for sister Minnie's boy Tom, who just can't seem to get along on the W. P. A.

A better way, of course, is to put a "Help Wanted" advertisement in the newspaper, and then try to select a few not-too-bad prospects from the motley horde that will answer. Sometimes good men are found in this way.

If you elect to locate your salesmen by advertising for them, be sure that you word your advertisement with

care—and with honesty. Don't try to paint the picture too brightly; tell the facts about the product that is to be sold; specify that it's a commission job; and insert some specific requirements regarding age, education, etc. All this will help to roughly qualify the applicants. Such tactics will save you a good deal of time and trouble in interviewing, and may eventually save you some cash.

Frankly, it is generally more satisfactory to locate salesmen in other ways. For instance, almost every dealer knows some man in his town who seems to have good qualifications and who might be interested. Why not talk it over with him? Or, perhaps inquiry among business friends may turn up a likely prospect for the job. No one can tell where a good salesman may come from—he may be a lad handling the hose in a gasoline station, or a clerk in a chain store.

Sometimes Inexperience Is Best

Often, in fact, it's the previously inexperienced man who has the best chance of making good. He's more teachable and, if he's of the sales type and enjoys contacts with people, you can make him *your* type of man rather than suffer because of his previous teaching that may not coincide with your ideas at all.

Of course, if you can find a man who is well acquainted in your territory, whose character and past record measure up to high standards, and who is honest and willing, he's a better bet than a stranger who may be a lot better salesman in many ways. After all, most folks would rather do business with friends than outlanders.

He may well be a mature man whose judgment will be respected, for he will be dealing in a fairly expensive commodity that requires a lot of consideration before purchase by the average family.

While salesmen may be born and not made, some mighty good imitations have been constructed out of seemingly poor material through careful training and wise supervision.

Some Get No Training

It's right there—in the matter of training—that many dealers fail to make the best of their sales help. Time and again a dealer will hire a salesman, spend perhaps an hour or so looking over the merchandise with him, then give him a price list and "turn him loose" on the long-suffering public.

The new salesman should be given a thorough schooling in the line. Allow him to study the ranges and other appliances until he is completely familiar with every part and every feature. Give him a thorough background knowledge of what bottled gas is, where it comes from, how it works, and its many advantages in convenience, cleanliness, economy, etc. Take ample time to completely familiarize him with price lists, contracts, and the other various papers and documents that will be needed in completing sales. Let him go out with the service man on an installation job or two. An important part of the new salesman's training should be his study of the various pieces of advertising material and other sales promotion literature issued by the bottled gas distributor, the range manufacturer,

and other suppliers whose goods are included in the line. And, while it isn't necessary for him to be an accomplished chef, he ought to be able to talk with some intelligence about broiling without confusing it with boiling. Mrs. Prospect will listen a lot more attentively if he knows just a little of what he's talking about.

While this preliminary period is going on, the new man should be taken along on calls by the dealer or an older, successful salesman.

Naturally, this training time is unproductive of immediately tangible results. The dealer, however, should look upon the expense it involves as an investment. A week spent in the ways suggested will pay for itself many times over in later results.

What are you going to have to pay a first-rate salesman? Well, that's pretty much a matter between you and your conscience—and the salesman. But if there's one place where "the laborer is worthy of his hire" it's in selling. A good salesman deserves good compensation.

Good Enough for Drawing Account?

That's why a man who's good enough to hire ought to be good enough to immediately put on a fair drawing account against commission. In most localities, a \$25 per week drawing account against a 15% commission should be paid on his initial sales. The kind of a man you want—and need—must have at least that much to keep himself presentable and satisfied during the difficult starting period.

This figure, admittedly, doesn't show any great advantage to the deal-

er during the first year of the salesman's connection. But experience proves that a man who is going to develop into a real sales asset ought to turn in approximately a sale a week in his first year, increase this to two sales a week the second year, and by his third year reach a minimum of three sales a week.

A Three-Year Sales Plan

Just to see how this works out for the dealer, as well as the salesman, let's set it up on the average basis of \$100 sales:

	No. of Sales	Volume	Commission
1st yr.*	52	\$ 5,200	\$ 780
2nd yr.	104	10,400	1560
3rd yr.	156	15,600	2340

*Drawing acct.: \$1300. Over-draw: \$520.

It doesn't take a very sharp pencil to figure out that a salesman who operates in this way becomes a definite asset, who has wiped out his original training cost, long before his third year has finished. For the bottled gas dealer, with an average gross commission of 40%, this represents a fair sales expense. As knowledge and ability increase, the salesman becomes a more and more valuable worker for the wise dealer. He's soon paying his own way by commissions on original sales he makes, and he's building a gas load that means continuing profitable business for the dealer.

In fact, the worth of that gas load is so great that the salesman should be given further encouragement and reward for securing it by permitting him to share in the profits it brings.

A commission amounting to 50 cents per 100 lb. cylinder is fair enough, and provides additional earnings that the salesman will appreciate. On the sales basis indicated, with gas consumption averaging three cylinders per year per installation, the salesman would receive a bonus of approximately \$78 his first year; \$156 the second year; \$234 the third year.

Salesmen Appreciate Recognition

You may be surprised to learn how much such a comparatively small additional remuneration will mean to most salesmen. It isn't half as much the actual money involved, as it is recognition of the fact that he is in this way building a continuing income. This should go on year after year, in the same way that an insurance salesman's premium commissions keep building up. It gives him the feeling of permanence—of "belonging." That pleases almost every man, and makes him a better and more dependable employee.

In setting up this picture of the earnings that a good bottled gas salesman should make, no consideration has been given to water heaters, refrigerators, or other appliances that the keen salesman will be able to dispose of in addition to installations of systems, ranges and gas. However, a salesman worth hiring at all should, through all his activities, by the end of three years in a dealer's employ, be making average earnings of around \$3500 per year.

One more important point regard-

ing the handling of salesmen is the matter of supervision. Seldom does a dealer find a salesman who doesn't, occasionally at least, need supervision. Intrinsically, salesmen aren't any more prone to bad habits than any other class of employees, but the selling temperament naturally inclines toward buoyancy and optimism. The wise dealer checks up, once in a while, to see that his salesmen aren't carrying their enthusiastic promises beyond the possibilities of fulfillment or in other ways "getting out of line." He always keeps his salesmen well informed regarding new product developments, price changes, altered conditions of all kinds. In short, he cooperates with them for mutual benefit.

Cooperation Gets Results

Sales management is, of course, a highly specialized field of endeavor. Certainly it's too complicated a subject to be treated exhaustively here. But, like almost any other job of management, it is comparatively simple when it's done according to a sensible plan, sensibly followed. It is being handled successfully by many bottled gas dealers who operate on the basis of *working with* their salesmen, instead of just working them.

To sum up the whole subject, experience proves conclusively that a well-trained, well-paid salesman is about the most productive asset any business can have. Bigger earnings for salesmen are a mighty good thing—because they mean bigger earnings for their bosses.



By JAMES W. RISER

Sales Manager, Carolina Butane
Gas Co., Inc., Columbia, S. C.

Owners of modest houses found the "package" method of buying butane gas and appliances fully as profitable as did those of greater means. Homes like these two were typical of those in which 78 systems were installed in and near Columbia, S. C., in a 30-day sales period.

It Pays to Make a "Package" Sale

WRAPPING butane gas in a "package" proved to be the biggest single sales stimulant in the 18-months' history of the industry in South Carolina, or since the advent of Carolina Butane Gas Co., Inc.

With a sales organization consisting of practically all new men, the company offered a special "Package Sale" on one Magic Chef range, one Ruud tank type water heater, one Quad space heater, and one Hydro Gas System, all for \$277.27, and sold 78 units within 30 days.

This was done at a minimum cost. Only two newspaper ads were run, both in the State paper of Columbia, S. C. One announced the package sale; the other called attention to the fact that only 10 days remained for interested parties to take advantage of this offer.

I attribute 45% of the total sales directly to prospects located by a coupon in the first of the two ads. In

addition to the splendid "Package Sale" results, a number of larger units were sold as a result of inquiries concerning the special sale.

Interesting things happen during most sales, but one in particular happened during our "Package Sale" which deserves special mention. We went into the largest electrical power development area in the Southeast, and sold eighteen Hydro Gas Systems in one month. These units were sold within a few miles of the project site of the \$37,500,000 Santee-Cooper Hydro-Electric Development.

These sales definitely established the valuable fact that it is practically as easy to make several sales to the same customer as to be content with one. After all, it means as much to him as to us, for he immediately has the use of needed appliances and the total amount involved is covered in one contract.



Gas Serves Mountain Resort



AT TOP: Interior of Tamarack Lodge, Twin Lakes, Sierra Nevada mountains, in eastern California.

ABOVE (left): The 830-gal. butane semi-bulk plant that supplies the resort with heat, fuel for cooking, and power for generating electricity which, in turn, is used for lights



and refrigeration at the Lodge meat market. ABOVE (right): LPG stove, typical of those in use in the housekeeping cabins.

BELOW: Twin Lakes, mountain beauty spot, where guests of Tamarack Lodge enjoy home comforts, thanks to the liberal use of liquefied petroleum gas.



They Burn Butane Where Wood is Free

By PAUL LADY

TWENTY-EIGHT years of operating mountain resorts has taught Lloyd B. Austin many ways in which to cater to "city dwellers" who like to "rough it" on vacations. One of the first and more important rules, he says, is—make them comfortable!

With this thought in mind, Mr. Austin arranged early this season for the installation of a modern LP gas plant at Tamarack Lodge, his scenic vacation resort located on the shores of Twin Lakes in the heart of the Mammoth Lakes region, 45 miles from Bishop, Calif.

As the number of individual cabins grew during the 14 years Mr. Austin has been developing Tamarack Lodge, the problem of providing fuel for cooking, hot water and room heating became more difficult. For a time "bottled gas," with individual installations at each cabin, met the need. But with the recent completion of a number of new cabins, the question of fuel became increasingly vital.

The answer came when the Bishop butane dealer, Gene Thompson, sold Mr. Austin on the idea of a butane plant, from which piped gas could be served to all the cabins, and to the Lodge as well. It was the convenience, economy and permanence of a central storage plant, that enabled Dealer Thompson to obtain a contract for a tank and equipment, make the installation and furnish butane to the camp.

In spite of the fact that wood is abundant in this mountain area, bu-

tane gas furnishes fast, steady heat for part of the cooking at the Lodge, as well as fuel for a number of small individual heaters in rooms throughout the building. Electricity for the entire camp is generated by a Kohler electric plant operating on butane. This same power is used for refrigeration in the new meat cases at the village store.

In speaking of the success of his butane installation, Mr. Austin enthusiastically praises the use of this modern fuel for resorts or homes in the mountains or rural districts and says that butane has proven entirely satisfactory at his resort, adding "We now have 13 of our 32 cabins equipped with butane for cooking and water heating. Some have gas ranges with large ovens for baking. Others have three-plate burners that operate very satisfactorily. Next season will find all of them using butane for cooking and water heating. We have never been so thoroughly pleased with any fuel before, even though wood is easily available and, of course, cheaper."

The host of Tamarack, as anyone would be inclined to call Mr. Austin, for he takes a personal pride and interest in the comfort of every guest, is prouder of his butane operated Kohler electric plant than any other piece of equipment.

And he has a right to be, because with it he is guaranteed a constant

electric supply for his guests and help—numbering as many as 150 persons during the busy season. The plant will generate 5000 watts, which is ample for refrigeration as well as lighting.

In speaking of his butane storage plant, located on a side hill above the camp, Mr. Austin, stated, "That 830-gal. tank is large enough for our present needs, but I plan to add another tank of about the same size. This will allow a saving on fuel because I can buy a truck load at a time, for much less money. The long haul is an important consideration, too."

Mr. Austin estimates that the present tank filled with gas, will last about 30 days when the camp is full. With plans now to double his use of butane next year, he will use more than 1600 gals. a month during the busy season.

The elevation of Tamarack Lodge is 8600 feet. Snow comes early and lies deep in this isolated region. About

four months a year constitutes a season. With closing time approximately the first of October, the butane installation must be economical enough to pay for itself in this short period of time.

Butane is the answer to many problems that have faced Mr. Austin for years in his capacity as owner and operator of mountain resorts. To him it is another modern development that makes his job easier, his work more interesting, and his investment less costly—this, in spite of the fact that his first outlay is greater than for other fuel. In his statement pertaining to the success and practicability of butane for mountain resorts is perhaps indicated the future of this fuel. "You know," he said, "it is interesting to note that butane has suddenly become very popular here in the Mammoth Lakes region. All of the other camps are either putting it in or talking about it, mostly putting it in."



Host Austin, owner of the Lodge and booster for butane poses for his picture before a housekeeping cabin in which butane is used.

How Is Bottled Gas Sold?

Who Makes It? Who Distributes It? Who Uses It? All Is Cleared Up Now — for the Eastern States.

By **ELLIOTT TAYLOR**

NEW arrivals in the ranks of the LPG industry are often mystified by the fact that there appears to be no standard form of distribution and merchandising practice such as generally exists in older and less experimental selling fields. One of the questions most frequently asked is simply "How is this bottled gas sold, anyhow?"

Analysis Should be Regional

In an attempt to analyze the practices now in vogue, we are first of all confronted by the fact that in different sections of the country, different arrangements prevail. And these geographical differences are such that any analysis that is to be of practical value must be undertaken by regions. Obviously knowledge of a method of distribution that obtained in the Mid-Continent would be of little or no immediate value to a dealer, let us say, contemplating opening a territory in New England, if the Mid-Continent methods could not be applied to New England.

There are certain broad classifications of distribution services that are in a measure applicable to all territories, and no doubt as the industry advances those which prove to be the

most efficient will thus justify their existence and tend to become universal.

It should be stated at the outset that there is no agreement in the industry even as to the proper nomenclature by which the individuals or companies engaged in the various steps can be precisely defined. The terms "dealer" and "distributor" are often used interchangeably in actual practice—sometimes it would appear, for no more sufficient reason than that the contracts have been printed using the words to mean a certain type of activity, and there appears to be no particularly valid reason for changing them.

The block schematic shown in Fig. 1 is a skeleton outline of the steps in distribution from the producer to the consumer, as such distribution is carried out in the Eastern states. This would embrace a territory roughly outlined as from the state of Ohio, east to the Atlantic seaboard.

Study Covers Domestic Users

Consumers in this study are limited to domestic users, and small commercial users who are supplied their fuel or serviced the same as are domestic users. Industrial installations, where butane or propane are used as either the primary fuel, or as standby

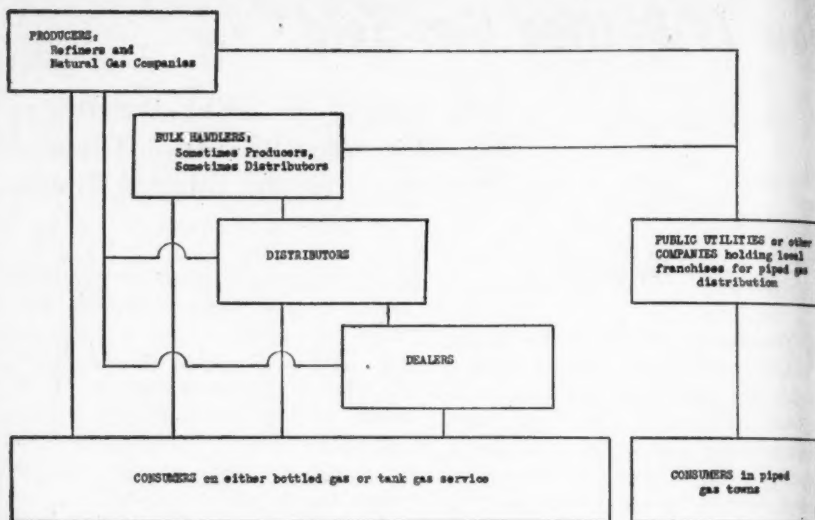


Fig. 1. Distribution chart that covers Eastern field.

or enrichment adjuncts to other fuel are not taken into consideration.

Producers. Practically all of the producers of LPG are refiners of gasoline or gas companies that obtain their supply from natural gas, natural gasoline or in connection with the refining of crude oil into gasoline and other products. As a result of this background, LPG was at the outset, and still is to some extent, a by-product of other and, to the refiners, more important operations. There are some exceptions to this rule, the most noteworthy of which is the Pyrofax division of the Carbide and Carbon Chemicals Corp. The original Pyrofax plant was built solely for the purpose of extracting LPG.

The principle producers having production in the East include: Carbide and Carbon Chemicals Corp.; Cities Service Oil Co.; Cumberland Gasoline Co., Gas-

Oil Products Co.; Hope Natural Gas Co.; Phillips Petroleum Co.; Sloan and Zook Co.; Standard Oil Co. of New Jersey; Standard Oil Co. of Ohio; Sun Oil Co. and Tidewater Oil Co.

Bulk Handlers. Companies and individuals engaged in this phase of distribution may be divided into four major classifications, according to their activities. First, they may be producers of LPG who handle in tank car lots the output of certain other refineries in addition to that of their own. Second, they may be buyers of tank car lots who do not operate cylinder or bottle filling equipment of their own, but sell only to distributors who maintain bulk stations. Third, they may be, in effect, subsidiaries or merely departments or divisions of companies in which bulk handling is one step in a complete producer-to-consumer system of opera-

tions. Fourth, they may exist as a combination of some phases of all three types of activity listed above—companies operating parallel systems of distribution selling part of their product direct to the consumer through their own sales organization, part of it to distributors who in turn sell to dealers, and part of it to dealers who resell only to consumers.

Distributors. Here the diversity of the use of terms is most often encountered. Certain producers and bulk handlers refer to that portion of the trade engaged in reselling to the consumer as distributors, while others use the word only to describe the operators of stations who buy in bulk, store the gas in bulk stations and fill bottles or cylinders for their retail dealers. The latter type of operation is the one encompassed by the use of the word distributor in connection with this study. Distributor operations vary in respect to the ownership of the cylinders and utilization equipment that is installed on the consumers' premises. Some distributors own this equipment, and have their own contracts with the customer for its use. In such a plan the dealers are in effect agents only for their particular distributor's gas. Others operate the bulk stations, fill and service cylinders for dealers, but the ownership of both cylinders and equipment reposes with the dealers.

The Leverage of Ownership

From a practical standpoint the distributor who owns both cylinders and equipment also retains an effective control over the retail business practices of his dealers, with the status

of the dealer sometimes that of an agent, only. Domestic appliances to be sold by the retailer or dealer are sometimes handled by distributor. Here he acts as a wholesaler, and presumably makes the necessary financial arrangements to enable his dealers to carry installment sale contracts.

Dealers. The status of the dealer has been generally described above, since the type of arrangement under which his distributor operates is the determining factor in the relationship to the distributor of all of his own particular dealers. Thus, dealers are in general of two classes: First, those who own their own equipment, and second, those who handle and sell gas in the cylinders and through the equipment of the distributors that they represent.

Town Plant Franchises

Indicated on the chart is one other method by which LPG reaches the ultimate user. That is through companies operating on franchises in towns where the gas is piped to consumers from a central station, in much the same way that natural or manufactured gas is distributed to utility customers. In the East most of the towns having this type of service are those being served by former coal gas or natural gas distribution systems that have been changed over to LPG.

There are infinite variations of the types of activity classified here, but it is probably safe to say that 90% of the distribution to the domestic and small commercial market for LPG in the East is through some channel or combination of channels listed above.

Sales Missionary Spreads Propane Gospel

By
FRED E. KUNKEL

ALONG the high power electric lines surrounding Richmond, Va., is found approximately 90% of the liquefied petroleum gas customers of the Natural Gas Co. of Virginia! This company is the exclusive agent for Pyrofax gas in 26 counties, with headquarters in Richmond.

As electric extensions increase the gas load grows, and in searching for the greatest contributing influence to this fact, in addition to the economy and convenience of LPG, the Pyrofax dealer has given credit to a special advertising campaign in which several thousand direct mail circulars were sent out and followed up by a young college man who was employed to carry on an intensive educational campaign. All this man does is to call on homes, offices, business and professional men, to explain the advantages of Pyrofax gas for cooking,

heating water, and refrigeration and to let people know it is available. He is not a salesman, cannot sell, and does not carry a price list or a catalog. His sole objective is to acquaint people in the country and small towns with what Pyrofax is and does.

"While we have done some newspaper advertising, gasoline is still called 'gas' by everybody in the country, and these people do not know the difference," it was explained. "It doesn't sink in and they really do not realize for what Pyrofax gas is used. Consequently we have found that mail circulars pave the way for direct contacts and the subsequent interview brings more results than any other method we have tried. It produces better results than any other form of advertising to have a man call, explain, and demonstrate just what Pyrofax gas is and means." Four sales

NATURAL GAS CO. OF VA., INC.
DISTRIBUTORS
NATURAL GAS SERVICE PYROFAX COOKING-WATER HEATING
REFRIGERATION ETC.
BIDE & CARBON CHEMICALS CORP. - NEW YORK, N. Y.



The Natural Gas Co. of Va., Inc. believes in regional Fair exhibits. Here is one display which features trade names and appliances.

men are employed to follow up leads turned in by the college missionary, or from satisfied users.

Cooking schools in small towns, staged in a motion picture theater, or vacant store on a prominent street corner, have proven very good sales builders. Display space is used at all state and county fairs and always attracts favorable attention.

"The majority of people we sell are country folks and a big percentage of them learn what it is all about when we have these exhibits and conduct a cooking school," a company representative stated, "but we find we have to make more call-backs to sell Pyrofax service than we would in order to sell a gas range in the city."

Promotional Installations

House-to-house demonstrations have been employed in the past. That is, a four-burner, insulated, automatic range would be taken to a home, a restaurant, or elsewhere, and the prospect asked to use it for three days. This was not considered putting it in on trial, but setting it up purely as an advertising and sales promotion idea. It was not especially installed for actual prospects who were in the market, nor was any particular home or restaurant usually picked out, but it was located more or less haphazardly—just anywhere and everywhere people had use for Pyrofax . . . and it resulted in sales to more than 90% of the cases.

Individuals and business firms often said it was folly; that it was wasting their time and throwing away sales effort, yet these same people bought in the end. But the company

has later found so many good prospects which come from satisfied users, that it does not have time now to continue the use of this demonstration idea. It did help immeasurably, however, to open up the territory.

Among some of the larger installations of equipment are the ones in William and Mary College at Williamsburg, Va., which has more than 600 burners in use. The piping alone cost \$1350. Pyrofax gas has also been found very useful in the college laboratory work at this institution.

Another installation was in St. Joseph Villa (an orphanage for children) with 11 large buildings and a central kitchen. Formerly they used electricity in the kitchen and central bakery, with a large bake oven and range. After investigating and installing Pyrofax four years ago they took out all their electric equipment and put in Pyrofax ranges in each of the 11 buildings and now use LP gas exclusively. They claim to save more than \$100 a month on fuel and state that their baking and cooking is much better and more satisfactory.



Vici, Okla., Installs Butane For Gymnasium and City Hall

By combining the efforts of the town board, the local school district and the good offices of the WPA, the town of Vici, Okla., now has a new city hall and gymnasium, with insurance against winter cold by the installation of a modern butane heating system. Butane gas will also heat the water for the showers and may later be used for cooking at community gatherings.

Neither the school district nor the town had funds for needed buildings, but by cooperative effort the combined project was arranged.

Let the Prospect Sell Herself

By **OLGA V. HANSCOMB**

Director of the Betty Service Home Institute,
St. Paul Dispatch-Pioneer Press, St. Paul, Minn.

FOR the past twelve years, the writer has had some small part in assisting Northwest homemakers in the selection and use of household equipment. For the past four years, part of these efforts have been devoted to the promotion of "bottled gas" as a fuel for cooking, refrigeration, and hot water heating.



OLGA V. HANSCOMB

Primarily, this experience has been limited to the demonstration approach, but an occasional follow-up on the service end, and a great deal of time spent with individual customers, have brought several definite conclusions, which may be of interest to others in this field.

Sometimes I feel that the purpose of all advertising is very much misunderstood by a great many rural dealers. So many times a dealer will say, "The demonstration was a great success; I sold five stoves right after the sessions." Or, "My cooking school was a flop; here it is, the day after, and not a sale made."

Still, it is quite possible, that the

first dealer had a poor school, and the second a very good one. There seems to be a great deal of latitude as well as quite a little longitude in the term, "sale." For instance a certain appliance dealer told me that if he wanted to move 10 stoves, he would advertise that the price would be cut \$10 per unit, and if he wanted to sell 25 stoves, the advertised cut would be \$25 per unit. Possibly one dealer was right when I asked him how he could afford to sell an item at a 50 cent loss, and he answered, "Well you see, I make it up by the large volume I sell."

Be that as it may, it seems to me that there is a great deal more to it than getting the prospect to make a small down payment, and having her place her name on the dotted line. Because this is true, the prospect who, with some conscientious guidance from a real salesman, sells herself, is the most likely to fulfill the conditions of a true sale, i. e., mutual profit and satisfaction. All of which brings me to the subject that I wish to discuss: the demonstration as a means of aiding the prospect to sell herself.

At one time or another, practically every distributor of major household equipment has used cooking demonstrations as part of their promotional program. In most instances, these

demonstrations have been highly productive. In a few cases, high pressure methods have forced sales that have not proven "good business." I sincerely believe that a good deal of the unfavorable results have been due to two main causes. First, the program was not carefully planned, and second, it was not planned for long range results, but rather as a means for stimulating a quick turnover.

Two Kinds of Cooking Schools

In the past, cooking schools have been either one of two types. The large school, in metropolitan centers, with highly publicized demonstrators, and generally sponsored by newspapers; or, the demonstrations conducted by factory or distributor representatives, before small groups, in the distributor's place of business, or in small halls. The large cooking school is generally a good show; it attracts large crowds, distributes hundreds of gifts, and leaves a very hazy idea about the products represented, as far as the audience is concerned.

On the other hand, the company demonstrator, too often, places so much stress on the products which she represents, that she puts the audience on the defensive, and gives very little information outside of the fact that she is selling a certain product. There should be a happy medium, somewhere between these two extremes, a demonstration that puts on a good show, imparts reliable information, and impresses a prospect with the worth of the product without cramming advertising down her throat. I have listened in on some demonstrations with much the same feeling as

I imagine the bridegroom has at a "shot-gun" wedding.

In my own programs, by the "trial and error" method, certain essential factors have been determined. Naturally, the ideal circumstances for demonstration work is never completely attained, but constant care and effort in planning, will go far toward perfection.

It is my belief that the complete program should be controlled by the company whose product is being demonstrated, and should be subsidized by it to such a degree that this control cannot be questioned. The choice of a demonstrator is of paramount importance. I was once asked by an advertiser to "shop" a certain demonstrator who was using his product in a cooking school. For the first 45 minutes she regaled the audience with her educational qualifications, the things she had accomplished, the wonderful positions she had held, and the exhaustive tests she had made in order to bring this program to the audience, and after two hours I left, having seen one rather lopsided cake frosted with very runny frosting, and a pre-baked ham which had been glazed in the broiler.

Guests Know Good Cooking

It should be remembered that the demonstrator will be talking to experienced homemakers; she should be mature, with a thorough knowledge of homemaking problems, and the sort of a person who likes people and gets along well with them. She should be able to talk well and work with her hands at the same time, an accomplishment which is not given to all.

Experience has taught me that the average dealer has neither the ability nor willingness to properly promote a cooking demonstration. Many of them cannot even be depended upon to see that equipment is properly serviced for the demonstration. With modern stoves, advertising accurate oven controls, a demonstrator is pretty badly handicapped when she finds her oven 40° to 60° slow or hot, and top burners blazing with bright yellow flames. Still these things do happen in many cases, and it doesn't help much to have the dealer insist that the "stoves are thoroughly tested at the factory before shipment."

Becomes Community Affair

Inasmuch as most "bottled gas" demonstrations are made in farming communities, every effort is made to get the majority of the local business firms behind the event. In this way it becomes more or less of a community affair. In this way, a good deal of the sales resistance set up by factory demonstrations is overcome. The emphasis is not placed on the dealer or the product, in the publicity, but is rather designed to emphasize the school as an attraction, quite apart from the advertisers or products involved.

Naturally this plan has caused some arguments with dealers and manufacturers who insist that they are paying for publicity for their products, rather than cooking schools and demonstrators. However, we have been actuated by the knowledge that women are very much afraid of being sold, and the promotional advertising and demonstrations place as little accent as

possible on the idea that sales are the purpose of the school.

If the women can be induced to attend the sessions in the belief that they will receive new ideas, accurate information, and some entertainment, the first step toward a common meeting ground of the product and prospect has been accomplished, without any mental reservations on her part. From then on, the competent demonstrator will lead the prospect through a convincing showing of the reliability, versatility, and other features of the product, with scarcely an indication of a sales talk. Any speaker, with public address experience, is able to sense the moment when a majority of the listeners have accepted her. This varies much with different audiences. Sometimes I have been able to get this signal within a few minutes after being introduced, and there have been times when I have spent more than 60 minutes before I felt that I had broken through, and had the acceptance of my audience.

Personal Equation Comes First

Up to this point, a demonstrator is selling herself, but until that sale is made there can be no common mental meeting ground for any promotional effort which is designed to follow. When the demonstrator has sold herself to the audience, she must use care to maintain and build that confidence by her statements and actions, and adroitly transfer that confidence to the products she is representing. Each individual naturally has her own method of inspiring this confidence in her product. I have reduced this to

a simple formula in my own case. Sell yourself, positively identifying your products, stressing outstanding features, and allow the prospect to form her own conclusions. I would like to hope that the reaction produced in the prospect's mind would be something like this, "She certainly knows her stuff, and that stove works like a charm; I wish I could have it in my own kitchen."

Husbands Don't Like to Wait

Many of you may feel that I have over-emphasized the demonstrator, but then, I am a demonstrator. Naturally, there are other elements that are important to the success of a cooking school demonstration. No audience, especially an audience of good cooks, likes to be lectured to. Our nation's President has demonstrated his insight when he urges his wishes on the country through his "Fireside Chats." The average demonstration is too long. We advertise our programs for two hours, and my audiences are free in two hours if I have to pass up a programmed recipe. Women like to know just when they can get home, or when their husbands can call for them.

Approximately 15 minutes of each session is devoted to an open forum, and the women are invited to ask questions, either orally, or in writing. I believe that this is one of the most productive features of our demonstrations. It often gives me a deep insight into local problems that can be turned to good advantage in later demonstrations. Often the questions concern some technical features of equipment, or cost elements that vary

in different localities, and these are turned over to a company representative for discussion.

Another established rule is that no actual sales are made during cooking school sessions, or while the crowd is in the hall. No sales contracts or order blanks are in evidence. If a question of a sale is broached by the customer, her questions are answered, she is shown the equipment, but she is asked to call at the show room for the actual sale. We have found that a prospect is much more likely to commit herself if she knows that her order will not be taken on the spot. There is a certain sense of security in the feeling that you are not being solicited to buy. And you may be surprised to know that many women sneak in during the morning when I am preparing for my demonstrations, or call me at my hotel, with something like this, "Mrs. Hanscomb, I want to buy a new stove. If you had your choice, what stove would you really buy?"

The Sale's Real Purpose

This, briefly, presents my ideas on the successful promotion of "bottled gas" through the medium of cooking schools. After the glamor (we hope) of the cooking school has faded, after the high-pressure sales talks have been mulled over in the prospect's own home, what does she really think? Has the promotion been conducted on such a basis that the requisites for a successful sale have been complied with? Will the sale, if consummated, produce that mutual profit and satisfaction that constitutes a true sale?

In closing, I would like to add a

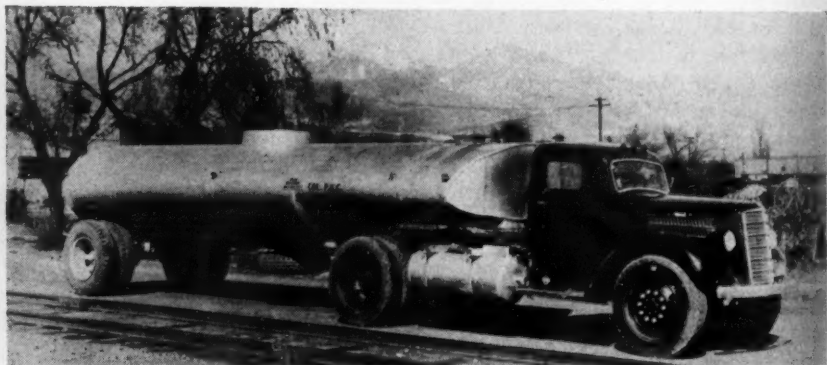
few thoughts for any and all organizations or dealers who are selling butane-propane to the consumer. My "pet peeve" in demonstration work, is the fact that so few customers are given first class service, once they have been sold. In more than 100 northwest towns where I have held "bottled gas" demonstrations I can safely say that at 50 of these points customers complained that their equipment did not work properly. Undoubtedly, many of these complaints were not justified, but in many other cases something was wrong.

At the instigation of the factory representative of one stove company, I have made trips into the homes of 10 or 12 women who complained that their stoves did not bake properly. In every one of these cases, I found the complaint justified. Yet some of these women said they had been com-

plaining for 12 months. I found that 18 friends of these women had bought another make of stove, and consequently another brand of "bottled gas," because of the failure of dealers to properly service these stoves.

No matter how much you spend for sales promotion, your business will stand or fall on the service you give your customers. Any organization that distributes butane-propane gas, accepts the responsibility of a quasi-public utility company, supplying gas for consumer use, and certainly must be prepared to furnish as good service as the large utility company in the neighboring city.

Show me a distributor who maintains a one-day service, and I will show you a distributor who will become a factor in the field. The fly-by-night never did plan on anything but the profit on the original sale.



This truck hauls crude oil to the Wasatch Oil Refining Co.'s refinery at Woods Cross, Utah, from Western Colorado, a distance of 475 miles and at altitudes ranging from 4000 to 8000 ft. It is equipped to burn butane fuel and is pulling a 4150-gal. transport tank. Owned by Owen M. Collett, Salt Lake City, and is typical to others in similar services.



Airplane view of modern Boulder City, Nev., where LPG is cutting into the home-grown electric load.

Propane Shows its Teeth

By O. D. HALL

LPG Has Electricity on the Run in the Shadow of Boulder Dam's Great Power Plant.

LIQUEFIED petroleum gas is successfully competing with electricity generated at the great Boulder Dam, Boulder City, Nev.! This is particularly true in the fields of cooking, hot water heating and refrigeration.

Such is the assertion of C. D. Knauer, manager of the Standard Oil Co. of California at its branch wholesale office in Boulder City.

If visitors to this famed center of electricity were to seek information upon LPG from the average resident, the chances are they would be told that they were in an electric town

and because of low rates, that character of fuel is used for most heating and power purposes. But investigation would surprise them by finding that there are more than 300 users of liquefied petroleum gas right in Boulder City and almost within the shadow of the dam, itself.

It is true that there were more than three times that many LPG customers there before the dam was completed, but when the electric power was available nearly everyone naturally changed over. But many of those who once used propane came to realize its greater adaptability and con-



Electric generating plants at the foot of Boulder Dam. Liquefied petroleum gas is more than holding its own against this competition, with 300 customers in Boulder City, Nev., home of the big dam, which rises 727 ft. above the swiftly moving waters of the Colorado River, shown emerging in the lower foreground of picture.

venience, and when they realized that even the cost is lower they began returning to gas, and every month now sees a substantial increase in the number of families who are deserting electricity for LPG.

Here are some of the figures showing increase in usage and costs, as revealed by Mr. Knauer:

There was a 7% increase in the LPG business in 1938 over 1937. During 1939 the business registered a further increase of 21% and that percentage of increase is continuing, although 1940 figures, of course, are not yet in.

Domestic electric rates from Boulder Dam are from 4 cents per kw. hr. to .4 cents for users of more than 450 kw. hrs. per month. "Flamo," the Standard Oil Co. LPG, handled in 91-lb. cylinders in Boulder City and vicinity, is selling at a price which

successfully competes with these rates, particularly for those using under 450 kw. hrs. per month. Cost of electricity in the smaller steps ranges from 4 cents to 1 cent per kw. hr., according to Mr. Knauer, who figures that at the small quantity price obtained for "Flamo," the LPG consumer pays an equivalent of .7 cents per kw. hr. If he uses larger quantities he gets much lower rates, making a still more favorable comparison with cost of electricity.

Mr. Knauer advances several arguments to show why he believes the LPG product he sells, with heat content of 2500 B.t.u.'s per cu. ft., is a more effective and economical fuel for most purposes than electricity. These include the infinite and immediate range of temperatures of gas, time saving and lower maintenance cost for appliances, and other factors.

Many people in Boulder City use electricity for all purposes, including house heating, and these obtain the minimum domestic electric rates. It is in the field of cooking, water heating and refrigeration, and in certain industrial uses, that LPG is making its greatest gains in the vicinity of Boulder Dam.

Rates on the gas are stepped down for larger consumers so that, in quan-



C. D. Knaur, manager of wholesale dealership, Standard Oil Co. of California at Boulder City, Nev., ready to go on a service call, with "Flamo" shown in 91 lb. (net) cylinders on the loading dock.

ties of 25 cylinders or more used per year, they pay as low as 4½ cents per pound. Larger users include operators of gold, silver, copper, lead and zinc mines. The gas is used in some of the gold mines for assaying purposes.

There are many domestic and commercial installations in the country and smaller towns in the section surrounding Boulder City.

Oneida (Wis.) Gas Co. Constructing Town Plant

The Oneida Gas Co. has been authorized by the public service commission of Wisconsin to construct a butane-air gas distributing plant in Rhinelander, Wis., according to news reports. The cost of the project will total about \$15,000 and it is planned to have it completed by Oct. 1.

Charles G. Grau, manager of the company, said the new type of gas will be purchased in tank car lots and distributed through existing mains in the city.

Mr. Grau said liquefied petroleum gas is now used in the Oneida Gas Co.'s Onigas cylinders, which have been on the market here for three years. The present plant serving customers or mains in the city manufactures water-gas he explained.

Present plans call for removal of all equipment in the original plant and installation of new equipment designed to handle butane-air or propane-air gas. The company's newer plant, which now manufactures the water-gas used in mains here, will be retained in its present state as an auxiliary or emergency plant. The old building will be remodeled before the new equipment is installed.



Annual C.N.G.A. Fall Meeting Will Be Held Nov. 1

The fifteenth annual Fall all-day technical meeting of the California Natural Gasoline Association will be held Friday, November 1, 1940, at the Ambassador hotel, Los Angeles, according to L. V. Cassaday, association president, and J. B. Taylor, chairman of the Fall meeting committee.

It is anticipated that two new bulletins which have engaged the activities of the technical committee will be announced and reviewed in the morning. The afternoon session will present a series of technical papers with provision for discussion periods, while the evening will be given to the association's annual banquet with entertainment following.

Reservations can be made with Geo. L. Tyler, secretary, C.N.G.A., 510 W. Sixth St., Los Angeles.

SELLING

A Distinction Without A Difference

Some men "work" and some men "play." It seems to depend upon the point of view, because the two words can be interchangeable.

In childhood, the two words were sharply divided in our minds and with some people the division remains throughout life. When we were called by Mother to mow the lawn or plant the garden or do the evening chores, we accepted the tasks for what they were—work. Certainly, they conjured up none of the delights we experienced from a dip in the old swimming hole, or from a game of baseball on the corner lot. And when called from these diversions, it was with a sigh of regret for we knew some uninspiring, dull and uninteresting task was in the offing.

The amazing thing is this: the play was actually more exhausting than the small amount of work we were called upon to do.

We must find an outlet for the energy that is stored within us, either in work or play, whether man or boy. If it happens to be the job by which we earn our livelihood, we accomplish two things at once. We advance our material interests while experiencing a delight and pleasure that could never come from our childhood understanding of "work."

When we recognize that the words "work" and "play" are interchangeable we are no longer mystified by the stories of the business man who works 18 hours a day or the scientist who will forget food and sleep in the interest of his search for an answer to an unknown. And as we explore in our minds the possibilities of our own job and recognize its opportunities, we strike a spark that fires the imagination and creates enthusiasm, transforming our "work" into "play."

If You Can't Find A Sale—Make One

"I will find a way or make one," said Hannibal, great warrior of ancient Carthage.

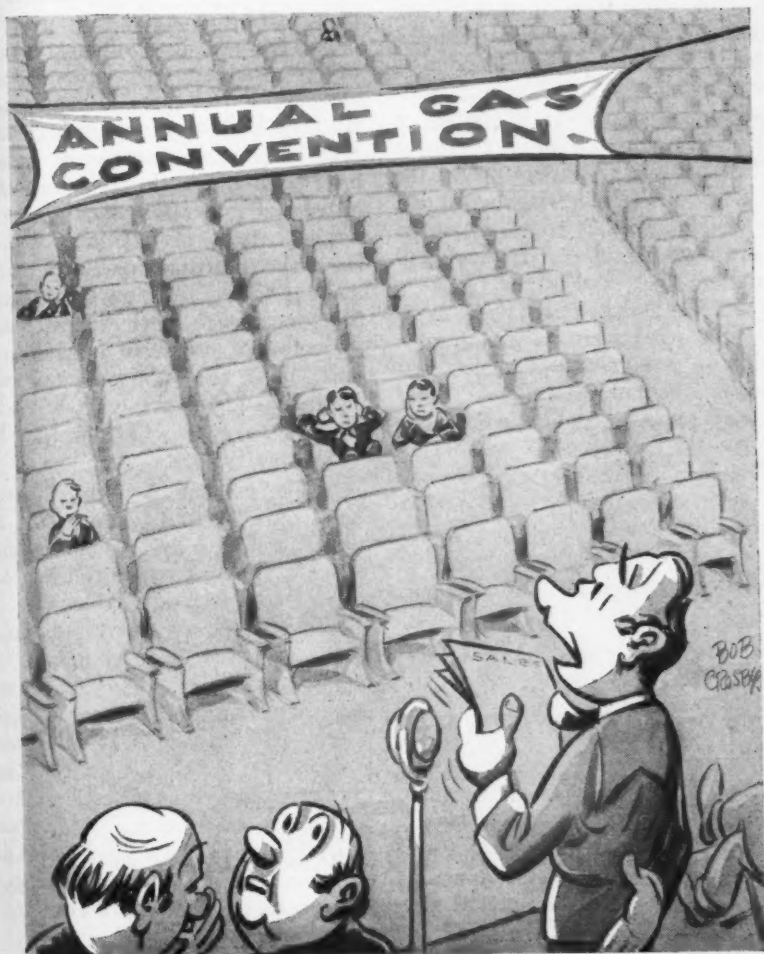
To find a way or make one was no simple problem for Hannibal. His undertaking was gigantic. The two great Mediterranean powers of Carthage and Rome, one on the African shore, the other on the European shore, were ambitious to make their own to the exclusion of others, the sea through which their merchantmen plied with cargo and commerce.

It was the avowed purpose of Hannibal to see that Carthage survived, that Rome was annihilated. In fact, he had sworn hatred to Romans as a child of nine.

On becoming the war lord of Carthage, he organized an expedition and led an invasion into Roman-held Spain, and across the Alps into Italy—a feat duplicated only once since in all history.

Although Carthage was eventually destroyed by the Romans, it was not until after Hannibal's time. Under

DOTTED LINE ROSCOE ... by Bob Crosby



"Roscoe worked three months on that paper, then his session comes the morning after the annual banquet and the day of the golf tournament - -!"

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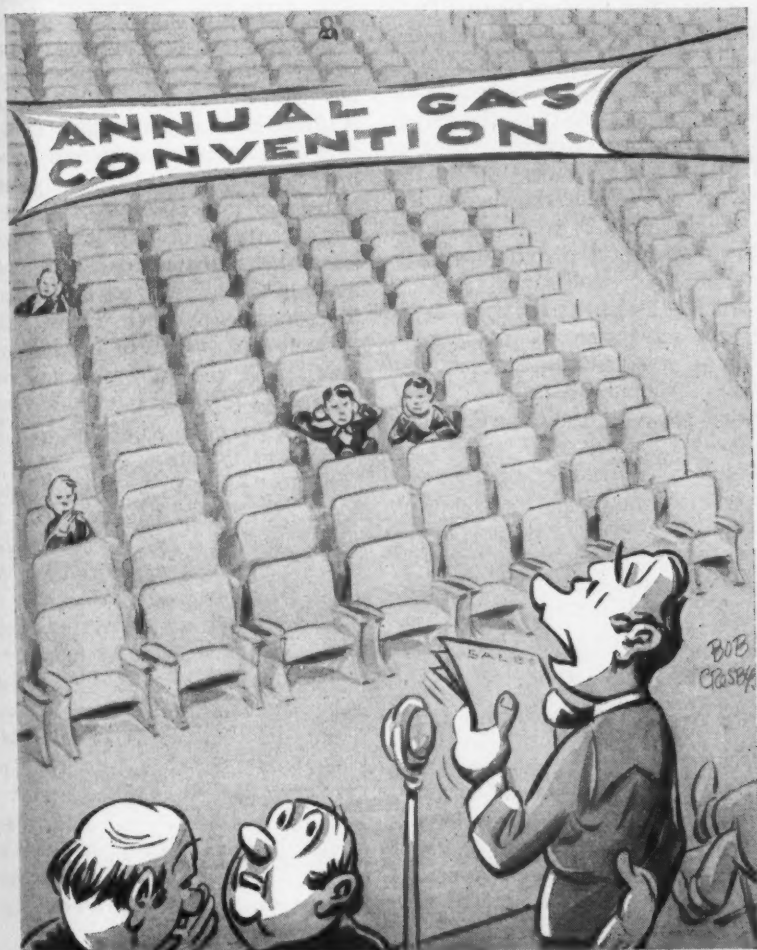
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his willful direction and determined leadership, Carthage won the position of dominant power of the Mediterranean and to Hannibal went a place in history with the world's greatest tacticians.

It is the lot of most of us to follow, leading the life of ordinary folks, with but a small majority "finding a way or making one." The great mass of people are committed to the life of humble workers and only a comparatively few shall be leaders. And the extent of one's leadership, as in the case of Hannibal, is to be measured by the degree of the individual will to find a way or make one.

There are sales to be had—more than you are getting. And in proportion as you make these sales, you command the fate of a few . . . by your will you alter and influence their lives for the better.

You'll probably never be a power over such vast territory as Hannibal controlled and your fame may in no way approach his—but you may be equally as worthy in that you use the power within you to find a way or make one.

That Family Dollar

Recently, we heard a gas appliance salesman complaining of the seriousness of his competition—others in his line of business. Did he consider that his only competition? Yes, like many salesmen whose eye goes only to the visible horizon!

But another type of competition existed for him and although no more serious perhaps, than the one he knew of, it was none the less to be con-

sidered and given his careful attention.

It is not only unseen but a subtle type of competition and the salesman must be on the job early and late to beat it.

As an illustration, it is not the neat, trim secretary or vivacious blond, as the gossip-mongers would prefer to believe, who gives the wife competition for her husband's time. Rather, it is a set of golf clubs in preference to an afternoon at home; a brief case of work from the office instead of an evening at the movies; a stag party with old friends that will keep the husband out until a late hour. And it is many other similar diversions with which the wife must compete for a share of her husband's time. Too, she knows that an evening he spends over work or in other ways is an evening of his time lost to her forever.

In like manner, it is the furniture merchant, the automobile dealer, the bond salesman and a number of others who are out for the family dollar just as is the refrigerator salesman. If they win, he loses—the family dollar is only so big and will go only so far.

This "unseen competition" is a serious matter in our business. Never doubt it! As an example, Mrs. Housewife can just as easily as not get along another six months or a year with her old gas stove—she can sacrifice this need, and a great one if she only realized it, to other purchases, less pressing, perhaps, if the truth were known.

One good solution is to apply the "early and late" practice. Keep after your prospects during every working minute of your day.

Louisiana Butane Dealers Meet

By CRAIG ESPY

THE Louisiana Butane Dealers Association, Inc., which has been so busy during recent months in helping to reshape the bill regulating the butane industry within the state of Louisiana, came together at Shreveport, Sept. 14. Fifty-five men attended the all-day meeting presided over by J. R. Holicer, president.

W. P. Thomas, director of the Gas Division of the State of Louisiana presented a paper revealing the amendments and changes in the original act No. 378, adopted in 1938. His paper also dealt with the growth of the

industry in Louisiana by which underground installations have increased from a scattered 200 before 1936 to more than 9000 installations in August, 1940. Facts he presented revealed that there is still a gross potential market for LPG systems in the homes of 1,450,000 people isolated from natural gas lines.

Sam Caldwell, mayor of Shreveport and Larry Mailhes, of the Chamber of Commerce, welcomed the conference



Two trios line up at the Louisiana Butane Dealers Association. Left to right: Chris Faser, Public Service Commission State of Louisiana, Assistant Secretary and Assistant Treasurer, H. S. Phillips, General Gas Corp., Baton Rouge, vice president; Mayor Sam Caldwell, City of Shreveport, La.; J. R. Holicer, Holicer Gas Co., Shreveport, president; W. P. Thomas, director Gas Division, State of Louisiana, Baton Rouge; Larry Mailhes, Shreveport.



Mrs. R. H. Burlford, Holicer Gas Co., Shreveport, La., pinning a badge on Louis Abramson, Petroleum Gas Corp., New Orleans, Chairman of the Southern Section of the L. P. G. A.

to the city of Shreveport, the former referring especially to the great potential future of the industry judged from the standpoint of its ability to provide service. Louis Abramson, Petrolane Gas Corp., New Orleans, and Chairman of the Southern Section of the Liquefied Petroleum Gas Association, gave a response to the mayor's speech.

In a talk on "Corrosion of Underground Tanks," H. E. Perry, Mosher Steel Co., Houston, Texas, suggested the very serious nature of the problem and pointed out that any chemist who would come forward with a sure fire method for preventing corrosion under all circumstances and under all soil conditions would make a great name for himself in the industry. He spoke of certain methods that had been used to control aboveground corrosion and expressed the thought that if the tanks were sand blasted, then

covered with a material and wrapper of certain (unnamed) component parts, the problem might be whipped.

In speaking on "Butane Carburetion," Downs Blackburn, of the Dallas office of Ensign Carburetor Co., pointed out that no defense is needed for butane for power purposes, for it has already proved itself in this category. The fuel saves wear on engines, he said, due to the fact that the oil remains in better condition because there is no crank case dilution when butane is used. Another economy pointed out is that butane is cheaper than some other fuels. Reference was also made to the fact that butane dealers can use this summer automotive fuel business to off-set or level off winter peak domestic business.

L. R. Maxwell, General Water Heater Corp., Burbank, Calif., spoke on "Appliances for Utilization of Butane Gas and Necessity for Standard-

MOYNO L.P.G. PUMPS

A Revolutionary New Pump for Butane and Propane



Robbins & Myers has designed the Moyno L.P.G. pump specifically to handle highly volatile liquids . . . safely . . . efficiently . . . economically. One of the simplest pumping mechanisms ever developed. Check these nine "Moyno Exclusives" against any other pump in the world and you will realize why a *thorough* investigation may mean more profit to you. Send coupon for detailed, descriptive booklet TODAY.



1. NO VALVES.

2. NO VAPOR LOCKING.

3. SELF-PRIMING EVEN WITH HIGHLY VAPOR-DILUTED LIQUIDS.

4. LOW INTERNAL VELOCITIES, WITHOUT TURBULENCE OR CAVITATION.

5. POSITIVE DISPLACEMENT.

6. SMOOTH, UNIFORM FLOW. NO PULSATIIONS.

7. UNEXCELLED SUCTION CHARACTERISTICS.

8. COMPACT DESIGN AND LIGHT WEIGHT.

9. SIMPLEST CONSTRUCTION, EASILY INSTALLED AND SERVICED.

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OCTOBER-1940

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ization," telling what appliance manufacturers had done to standardize their appliances and bring them up to A.G.A. Testing Laboratory specifications. He feels that standardization should also be carried to dealer organizations in teaching standardized practices of installing and servicing appliances and systems. A further step recommended is a standardized mark-up in prices of appliances and systems.

Fred La Fortune, Warren Petroleum Corp., Tulsa, Okla., made a talk on butane under the title, "What Butane Is and Where It Comes From."

Selective Draft Endorsed

In the concluding portion of the business meeting a motion was passed endorsing the selective draft but calling for the appointment of a committee to study the effect the draft will have upon the organizations of butane dealers. If too extensively affected, and if feasible to do so, the group may attempt to get eligible men of the industry placed in a delayed bracket, or classification, due to the necessity of the service provided. Louis Abramson, J. J. Oden and W. P. Thomas will study the subject.

A motion was also passed to print a membership certificate to be presented to each member of the Association. The conference ended with a chicken dinner and entertainment given at Antique Garden.

Members of the standing committee of the Louisiana Butane Dealers Association, Inc., are: Membership—V. E. LaGrange, Quentin Jones, Aaron Abramson. Corrosion and Protective Coating—Aaron Abramson,

G. F. Becker. H. E. Perry. Growth and Activities of South—Louis Abramson, J. C. Sanderson, J. W. Winton, R. D. Phillips, C. J. Bender, T. G. Tackett. Meeting and Conventions—H. A. Phillips, A. R. Blassman, W. A. Spofford, Joe Mistratte.



Department of Agriculture Finds Propane Superior Fuel

The U. S. Department of Agriculture has recently issued a booklet entitled "Liquefied Gases for the Household." It is known officially as Leaflet No. 191 and was prepared by A. H. Senner and Helen S. Holbrook, the latter being the household equipment specialist for the Bureau of Home Economics.

The pamphlet covers the entire domestic field in which LPG is used. Under the section devoted to cooking, it is stated, "On an average, the time needed on the liquefied gas stoves to do the same cooking was 88% of the time required on the electric stoves, 92% of that required on the kerosene stoves and 94% of that required on the gasoline stoves. The fuel consumed in cooking the same meals on the various stoves used in these tests indicated that 100 pounds of propane gas used for cooking would be the equivalent, respectively, of about 350 kilowatt hours of electricity, 25 gallons of kerosene, or 27 gallons of gasoline."



Redding, Calif., Adopts Butane Ordinance

An ordinance controlling the storage and handling of butane and other liquefied petroleum gases was adopted by the Redding, Calif., city council on Aug. 30. It becomes effective in 30 days thereafter.

The ordinance provides for a fee of \$5 for commercial plants or motor vehicle filling stations and \$1 for domestic installations.

Above-ground tanks are limited to 55 gals. and underground ones to 250 gals. The fire chief will make all inspections.

FISHER

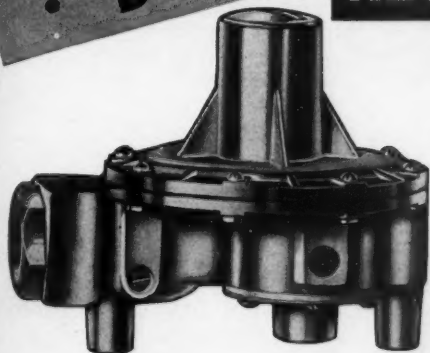
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Single OR
DRUM

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REGULATORS



Available for either single drum service with various inlet and outlet connections, or for multiple drum service with different pigtail and manifold assemblies.

Designed to handle all domestic and normal commercial loads—the capacity of these regulators is UNQUESTIONABLY THE LARGEST OF ANY MEDIUM SIZE REGULATOR ON THE MARKET.

Listed as standard by Underwriters Laboratories. Write for Bulletin 42-D—gives full details of the complete line of FISHER LIQUEFIED PETROLEUM GAS EQUIPMENT.

- ★ All alloy metal die cast body and diaphragm cover.
- ★ Easily renewable valve disc.
- ★ Improved built-in safety relief valve.
- ★ Pressure setting easily changed.
- ★ Fully tested for operation, flow and leaks.
- ★ Capacity, suitable for loads up to 120 cu. ft. per hour or more.

FISHER

GOVERNOR COMPANY

917 Fisher Bldg., Marshalltown, Iowa.

OCTOBER-1940



Installers for the Oklahoma Butane Gas Co., unloading 22-ft., 1500-gal., butane tank into hole at Baptist assembly grounds near Davis, Okla. While the steep bluff and thick growth of trees made approach to the site difficult, one of the trees came in handy as an anchor for hoisting apparatus used in lifting the 3000-lb. tank from the installation truck.

Baptist Group OK's Butane

BUTANE equipment has been installed to supply fuel for a 50 kw. electric generating plant provided during July on the Baptist assembly grounds, six miles southeast of Davis, Okla.

The Oklahoma Butane Gas Co., Oklahoma City, Okla., furnished, and installed a 1500-gal. underground tank and regulator equipment to deliver butane at 8 oz. pressure through 30 ft. of 1¼-in. pipe to two gas engines of 36 hp. capacity each. The gas is fed directly to butane carburetors located on each engine. The engines are set on either side of the electric generating unit, which is operated by belts from the engines. Either or both engines can be utilized as the electric load in the camp may demand now or in the future.

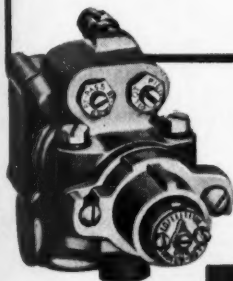
While the butane equipment only supplied fuel for the electric generating unit which furnished lights for the Baptist convention assembly that was in session on the grounds from Aug. 5-15, it ultimately also will supply the camp with fuel for cooking and heating purposes, according to C. J. Nicklas, owner of the installing company.

The Baptist Assembly grounds include 175 acres in the picturesque Arbuckle mountains near Turner's Falls, Price's Falls, and not far from Platt National Park, all popular resorts. There are 100 permanent buildings on the assembly grounds, said to be the largest in the world devoted solely to religious purposes. The grounds are used by many Baptist churches in the South and Southwest.

ROBERTSHAW HEAT CONTROLS

Another big step forward in simplification—heat control dial and gas cock handle combined in a single unit and operated with a single motion! That saves time for the user. Also it ensures greater accuracy in baking and roasting: the control must be brought back to zero each time the gas is turned off, must be reset each time it is turned on. Now cooking by gas offers every advantage, including the highest development of automatic control.

"We favor adequate preparedness for national defense and recommend enlistment in the U. S. Army to eligible young men."



SIMPLE TO SERVICE

New simplified front calibration, by-pass and pilot adjustment. Can be checked with absolute accuracy at room temperature.

Oven valve and thermostat assembly form one unit removable from front without disturbing fittings. Cannot be replaced incorrectly.

ARE YOUR SALESMEN
ARMED WITH
THIS EFFICIENT
SALES MANUAL?

It's boosting earnings
for thousands of sales-
men every working day.
Write for a copy — free.



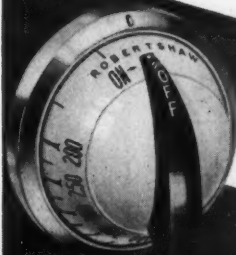
SIMPLE TO OPERATE

A single motion

TURN'S GAS ON FULL
SETS CONTROL

A single motion

TURN'S GAS OFF
RETURNS CONTROL TO ZERO



ROBERTSHAW SPEEDS SALES

ROBERTSHAW THERMOSTAT COMPANY, YOUNGWOOD, PA.



HYDRO-GAS ANNOUNCES A NEW FLASH-TYPE L. P. G. SYSTEM "THE DL-8"



This winter sell a trouble-free L. P. G. system. The patented Vaporizer and Re-Vaporizer, exclusive with Hydro-Gas, insure efficient gas service at low atmospheric temperatures. Correspondence is invited from responsible prospective dealers in territories not now served by Hydro-Gas.

Since their introduction seven years ago, Hydro-Gas Systems have become the accepted choice of thousands. Continued research and development have from time to time brought about advances in construction, and the patents covering these features exclusive with Hydro-Gas are among the broadest and strongest existing in the industry.

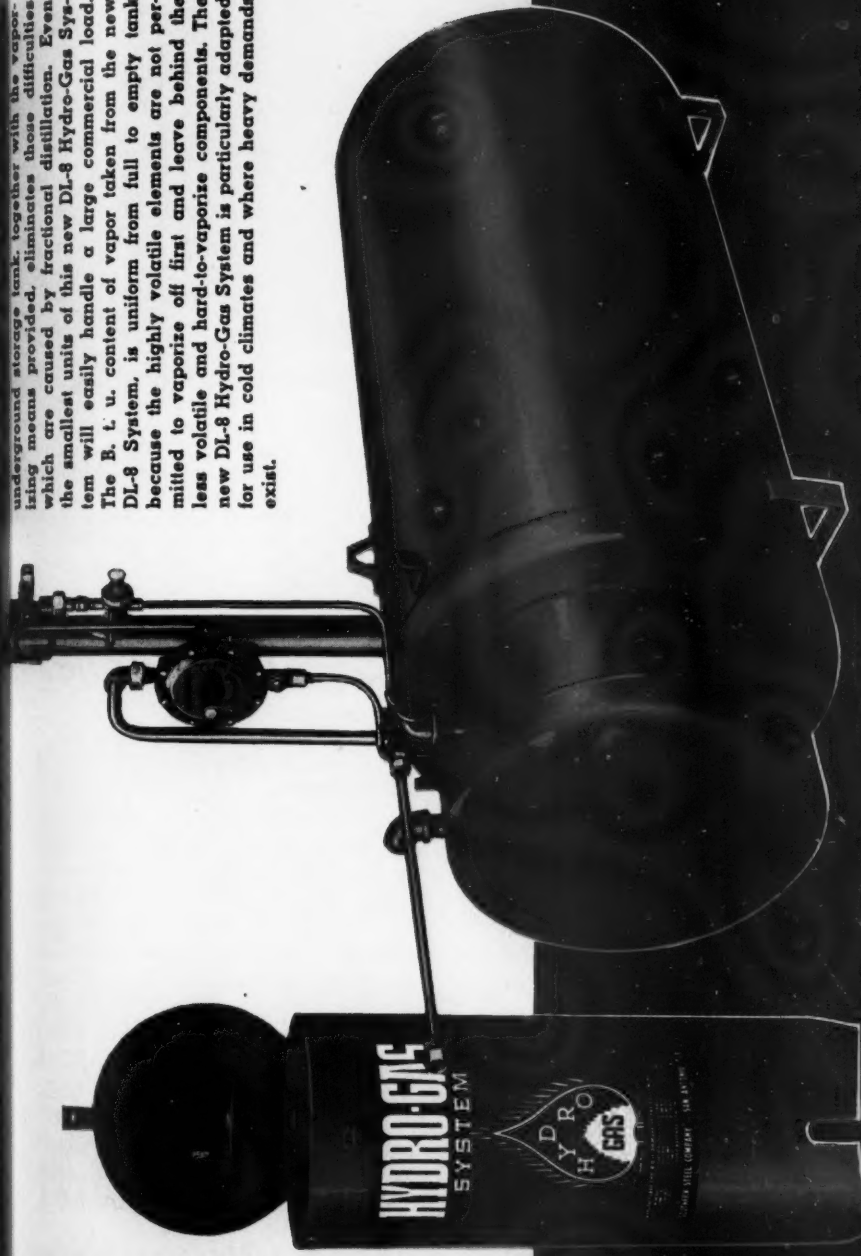
Now Hydro-Gas comes forward with an addition to the line, a model to be known as the DL-8. Equipped with the same well-known patented Re-Vaporizer which has distinguished Hydro-Gas Systems since 1933, the new DL-8 is designed to meet gas service demands under any and all conditions.

The new DL-8 Hydro-Gas System, unlike other systems, does not draw vapor from above the liquid in the underground storage tank. Instead the liquid is drawn off near the bottom of the storage tank, and it is then passed through manual and automatic control valves into a liquid pressure reducing regulator which reduces the liquid from tank pressure to five pounds per square inch. At this point the fuel passes into a vaporizing coil inside the heat exchanger on one end of the storage tank which serves as a vaporizer. This initial reduction in pressure and the consequent presence of fuel into the heat exchanger at a low

underground storage tank, together with the vaporizing means provided, eliminates these difficulties

Correspondence is invited from responsible prospective dealers in territories not now served by Hydro-Gas.

storage tank which serves as a vaporizer. This initial reduction in pressure and the immediate presence of fuel into the heat exchanger allows underground storage tank, together with the vaporizing means provided, eliminates those difficulties which are caused by fractional distillation. Even the smallest units of this new DL-8 Hydro-Gas System will easily handle a large commercial load. The B. t. u. content of vapor taken from the new DL-8 System, is uniform from full to empty tank because the highly volatile elements are not permitted to vaporize off first and leave behind the less volatile and hard-to-vaporize components. The new DL-8 Hydro-Gas System is particularly adapted for use in cold climates and where heavy demands exist.



SOUTHERN STEEL COMPANY



The movie film, "They Drive By Night," starred Ann Sheridan and caused her to be hailed by truck drivers all over the country as the "ideal girl." On behalf of these drivers, Riss & Co., Kansas City, engaged in a Coast-to-Coast freighting business with a large fleet of butane-equipped trucks, presented Miss Sheridan with one of their latest rigs. Here it is en route to Hollywood from Chicago, and being autographed by a bevy of not impossible movie talent. The clever stunt brought national publicity to Riss & Co.—and didn't hurt the butane industry a bit!

"They Drive by Night"—On Butane!

COOOPERATING with Warner Bros., First National Pictures, in the publicizing of the picture "They Drive by Night," Riss & Co., of Kansas City, coast to coast truckers, sent one of their latest rigs on a goodwill tour from Chicago to Hollywood.

The trailer, known in trucking circles as the Monotrailer, an all-aluminum unit and butane powered, on arrival at its destination was presented with ceremony to Ann Sheridan, feminine star of the picture. This presentation, made possible by Dick Riss, was tendered in behalf of all truck drivers in the U. S. A. Truck drivers chose Ann Sheridan as the ideal

girl, following her appearance in the picture named.

On the way from Chicago to Kansas City, autograph hounds, acting in reverse, plastered the truck with autographs from people in all walks of life. Governors, mayors, city officials, trucking executives, drivers and countless others were walking up and putting down their names. Among the names of men in political life found on the trailer were, Governors Ralph Carr of Colorado, Blood of Utah; Mayors Stapleton of Denver, Ed Jenkins of Salt Lake City and Angelo Rossi of San Francisco. In Colorado, Riss & Co., selected a Diamond T

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Visit our building at the
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Ask for Mr. Frank Stubbs,
our Exhibit Manager.

**That's why more and more Bottled Gas Dealers
sell the AGP "Budget" Storage Water Heater!**

THERE is no better name in Heating and Plumbing than American Radiator & Standard Sanitary Corporation. To your customers it is an iron-clad assurance of quality, dependability and value.

This fact combined with right prices, and fifteen fine features is the reason you can increase your sales and profits with the **AGP "Budget" GAS-FIRED Storage Water Heater**—specially made for bottled gas. Heavily insulated and beautifully finished in white baked enamel with aluminum trim, the **AGP "Budget"** is available in heavy galvanized tanks in four sizes—15, 20, 30 and 40 gallons.

Right now it will pay you to write for the name of our sales office nearest you—and for full information on the sales features of the **AGP "Budget" Storage Water Heater**. Do it today!

**AMERICAN
RADIATOR & Standard
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New York CORPORATION Pittsburgh

Cast Iron & Steel Boilers & Furnaces • Radiators • Plumbing Fixtures
& Fittings • Air Conditioners • Water Heaters • Heating Accessories

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HEATING EQUIPMENT
COSTS NO MORE THAN OTHERS

DEFEND OUR COUNTRY ★ ENLIST NOW IN THE U.S. ARMY OR NAVY

OCTOBER-1940

South Bend

RANGES

THE NEW SOUTH BEND "STREAMLINE" SERIES

● We can't say enough for the *NEW Streamline Range Series*. . . These super values cannot be touched in their size and price class—and they are made to order for Butane-Propane gases.

Here are just a few of many exclusive features:

- Harper-Wyman Top Burners.
- Reflecting Bowl Top Grids.
- Black Beauty Body Steel.
- Streamline Design.
- New Low-Priced Heat Controls.
- Super Insulation and Hy-lo Oven Valves.

Space does not allow us to tell you even half the construction improvements in the Streamline Ranges — they compare with yesterday's range like a Streamline Pullman with a slow local. Built in seven models with one or two ovens, griddles, broilers, four to ten top burners. . . Why not be first to offer this profitable, fast-selling line — write for information NOW.



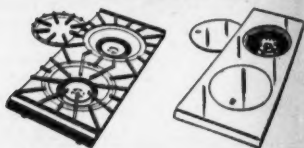
NO. 101

You Need Our Catalog!

The *South Bend* line fills every cooking need from one catalog. . . Five commercial range lines — bake ovens, griddles, hot plates, broilers, canopies, special equipment. *Family* gas and combination ranges. Ask about the new streamline griddles and the incomparably fine two-oven *South Bend* Combinations.



COMBINATION NO. 230-E



Left—Standard open grid showing Harper-Wyman burners and heat-reflecting bowl.

Right—Solid top section with removable lids over burners—available at small extra cost on any streamline range.

THE MALLEABLE STEEL RANGE MFG. CO.
SOUTH BEND INDIANA

tractor with sleeper cab to pull the outfit on the long trip westward to the coast from Kansas City. Drivers were Clyde Kingsley, 10 years with Riss, and John Roberts. Accompanying them were Marty Weiser, publicity man for Warner Bros. in this area, a photographer from the Acme Newservice, Inc., and the two sons of Dick Riss, Bobbie Riss, age 13 and Dick Riss, Jr., 15.

They traveled day and night except for the two nights in Salt Lake City and San Francisco. While en route, extra members of the crew slept in hammocks inside the trailer.

The final leg to Hollywood and the Warner Bros.' lot in Burbank was interrupted by many passing truck dri-

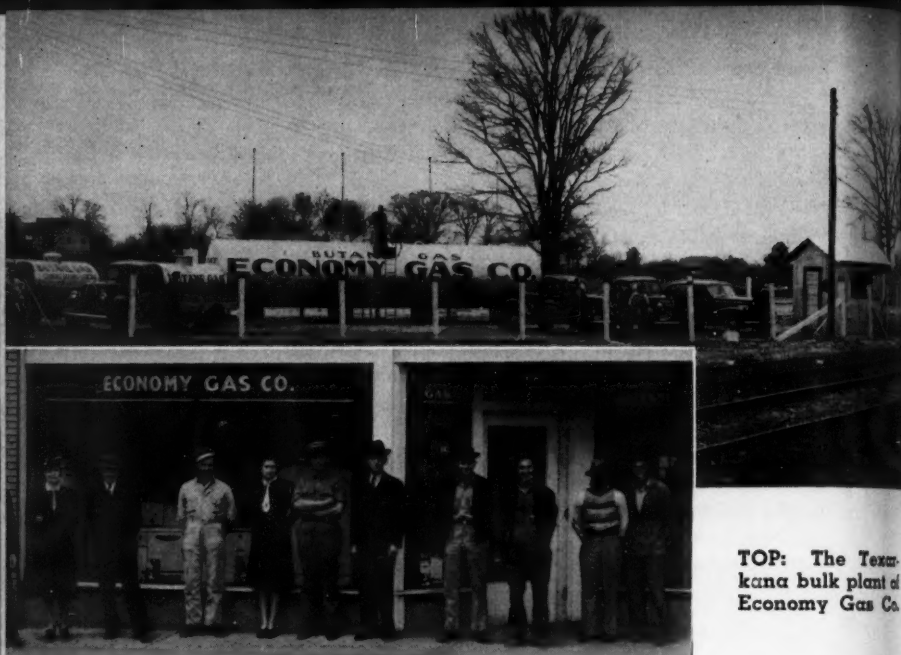
vers, eager to sign. Among messages were such as these: "If you were on the road, business would be picking up," "To Ann with the beautiful pan," "Ann, if you could only cook" and "To Cassie with the lovely chassis," (Cassie is the red headed waitress in the picture that Ann plays.)

In accepting this tribute from Riss & Co., on behalf of all truck drivers of America, Miss Sheridan finally decided the best good could be done by giving it to the Red Cross, and such presentation was broadcast on a national hook-up.

Most of the large fleet of Riss trucks engaged in the Coast-to-Coast service are butane-equipped.

Part of the sales organization of the Handigas Co. of Ohio, at the Lebanon, Ohio, main office. Front row: C. R. Baysore; R. T. Miller, secretary; S. G. Malone; A. T. Calder. Back row: Ward Talcott, vice president and general manager; H. H. Hamilton, Cincinnati district sales manager; W. H. Ratliff. In six months of operation this company has acquired 200 customers and new ones are being added at the rate of 20 per week.





TOP: The Texarkana bulk plant of Economy Gas Co.

FIRST ABOVE: Officials and employees in informal position for an official photograph in front of the company's office.

Politics and Butane DO Mix

IF one attended the political rallies in the area of Texarkana, Texas-Arkansas, it would be easy to believe that a leading candidate for some important office is C. C. Fricks, Economy Gas Co., so prominent is he in stumping the territory with politicians during the election seasons. But he is attending strictly to his butane business!

There is a standing offer to politicians which Mr. Fricks makes that allows them to use, without cost, his trailer and sound equipment. This offer has stood in force for the past six years during which time the can-

didates for most of the major offices have spoken from the trailer, which is transported for their benefit to the church or school yard or wherever the rally is to be held. There the various candidates address the audience over the loud speaker.

To make more pronounced the contribution Economy Gas Co. is making to the community and to the cause of better government the chairman of the rally always speaks feelingly a time or two during each rally about Mr. Fricks and Economy Gas Co.'s service and cooperation.

Speaking engagements were held in

FOR THE NATION'S

2 BIG MEALS



THANKSGIVING AND CHRISTMAS

ROPER

RANGES FOR ALL GASES

An ideal time to talk about gas ranges is when homemakers are thinking about big holiday meals. No other range so appeals to them, no other range is so easy to sell them as a modern ROPER, with its new beauty and exclusive features.

This is an excellent time to start actively promoting Roper Gas Range sales. Write for catalog and promotion book.

GEO. D. ROPER

CORPORATION

General Sales Office and Plant: Rockford, Illinois



**NEW STAGGERED TOP
FOR COOKING BIG MEALS**

Ample room for 4 large utensils. No hot handles! No reaching over and around! One of the many exclusive ROPER features!

FAVORED BY BOTTLED GAS DEALERS THROUGHOUT THE NATION

15 different communities during the current elections. Two candidates for judge, three for representative, one for senator, one for sheriff, one for county treasurer, two for circuit clerk, one for county clerk, two for constable, two for coroner and two for county surveyor spoke at the various rallies to crowds varying in size from 200 to 5000 people.

Mr. Fricks places the number before whom the equipment has appeared during the current political season conservatively at 12,000 people. These people reside largely in rural areas and are the very best prospects available for butane gas service. Excellent contacts are made at the meetings with both prospect and customer.

The trailer always carries a display, usually an Electrolux refrigerator, and invariably people come up to Mr. Fricks to engage him in conversation about his gas service. Sales have been traced four years later to an appear-



C. C. Fricks taking a rush order over the telephone.

ance made at one of the rallies.

One of the politicians, a candidate for the office of tax collector, told Mr. Fricks he would buy an Electrolux from him if he won the election. It is a known fact that the candidate was running behind at the time the promise was given but he later crept over the victor's line. The writer wonders whether Mr. Fricks didn't get out and do a bit of personal stumping for this candidate. Anyway the election was won and the candidate called the next day to select his Electrolux.

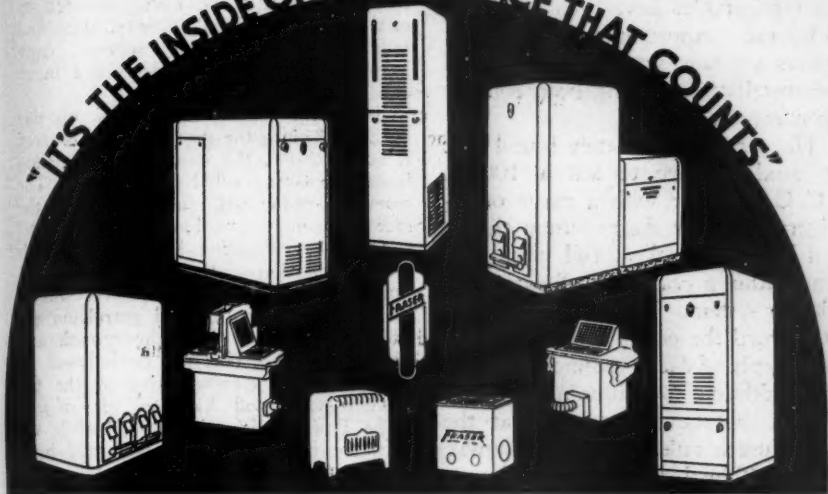
The use of the trailer doesn't stop with political stumping, of course, as it is used by the salesmen of the company in making demonstrations. Also, it is used in the parade at the Peach Festival at Nashville, Ark., and at similar events.

Borders on Four States

Several other points lay claim to importance in any story about Economy Gas Co. The first is presented in the unique location of the company with reference to four states. Texarkana takes its name from Texas, Arkansas and Louisiana. The official address of the company is Texarkana, Texas, but just across the street you are in the state of Arkansas. Drive approximately 35 miles and you are in Louisiana; 52 miles in another direction and you are in Oklahoma.

Fricks' Electric Co. was the forerunner to Economy Gas Co. In the original business Mr. Fricks had sold approximately 800 kerosene Electrolux refrigerators. He entered the business with these 800 people as prospects for butane. Since that time

"IT'S THE INSIDE OF THE FURNACE THAT COUNTS"



Efficiency ★ Long Life ★ Eye Appeal
Easier Sales . . . User Satisfaction

You will find in the Fraser line a type and size of LPG warm air equipment for every heating need. They range from circulating consoles to multiple outlet winter air conditioning systems.

Advanced engineering principles, fine materials and the eye-appealing modern design of Fraser Heating Equipment make your selling job easier . . . your customers satisfaction greater.

Ease of connecting simplifies installation . . . Pre-testing before shipment under actual operating conditions with LPG fuel assures unexcelled performance.

Fraser Furnace Company, already one of the country's largest manufacturers specializing exclusively in gas-fired warm air equipment has recently doubled manufacturing space in order that shipment may keep pace with constantly increasing demand.

***We shall appreciate your request for
 Illustrated, data and specification sheets.***

H.R. BASFORD CO.

DISTRIBUTORS

SAN FRANCISCO - LOS ANGELES

FRASER

GAS HEATING EQUIPMENT

FRASER FURNACE CO.

MANUFACTURERS

STOCKTON - CALIFORNIA

practically all of the kerosene Electrolux refrigerators have been converted to butane. Approximately 1600 customers are now served, with most of the installations having been sold by Economy Gas.

The company has lately found it to be good practice to sell a 100-lb., I. C. C. cylinder with a range or refrigerator under the provision that it will be taken back at full price anytime within a year as an allowance on a larger system. The company has also adopted the policy of checking the fuel supply of each customer monthly.

In addition to maintaining a 16,000-gal. butane storage tank at the warehouse a mile away in Arkansas, a small 400-gal. tank is in service on highway 67 leading out of Texarkana, supplying butane for automotive transportation. This service is provided through an arrangement with a local gasoline distributor.

The company operates seven pieces of equipment and two tank trucks. Two new cab-over-engine trucks will be put into service shortly. All of the automotive equipment of the company is maroon in color, this being the standard color of the company. Four pieces of the equipment operate at the present time on butane.



Pacific Coast Section Will Stress Safety at Fall Meet

The Fall meeting of the Pacific Coast Section, Liquefied Petroleum Gas Association, will be held in Fresno, Calif., Oct. 19, and program arrangements are being completed by a committee headed by C. L. Parkhill, section chairman, and including Tallent H. Ransome, Stanley Clithero, John Howell and John Kunkel.

The theme of the meeting will be

"Safety" and, in accord with this, invitations to attend have been extended to men in the municipal, county, state and federal fire and forestry services, regulatory bodies, safety engineers and insurance underwriters.

Since the affair will be a one-day event and since the ground to be covered is so extensive, the customary association business meeting will be eliminated. The morning session will start at 9:30 in the old auditorium, one block east of Hotel California, convention headquarters, with the presentation of three papers, each 15 minutes long. The first of these will be on behalf of the liquefied petroleum gas industry and will show the growth and scope of LPG. This will be followed by a paper by a representative of the fire services who will have as his subject, "The Fire Chiefs' Viewpoint," while the final short paper will be presented by a representative of the insurance underwriters whose subject will be "The Insurance Underwriters' Viewpoint."

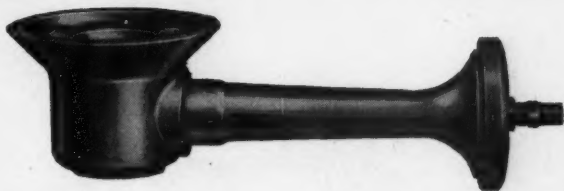
The fourth morning paper will be delivered by John Howell of the Union Oil Co. It will deal with the physical properties and characteristics of LPG and will explain such things as vapor pressure, inflammability limits, etc. Mr. Howell's talk on butane will be accompanied by actual demonstrations on the stage.

In the afternoon the group will reconvene at the Fresno county fair grounds. The program will deal with actual demonstrations of fire fighting, fire fighting apparatus, fire prevention and control the operation of butane safety devices, elements of installations, transfer of fuel, pumping, etc. Each of these will be accompanied by a running account over a loud speaker system, given by an authority on the particular demonstration.

The objective of the meeting is to give those in attendance a better understanding of liquefied petroleum gases while, at the same time, to provide our industry with an opportunity to better understand the problems of those services concerned with public safety.

The meeting is open to all interested parties. Additional information may be had from John H. Kunkel, sectional secretary, at 1625 S. Alameda St., Los Angeles.

A New Gas Burner for Hot Water Heaters



Shown above is the new Ransome Burner, especially designed for application to domestic hot water heaters. This burner is comparatively light in construction, and is applicable to natural, manufactured and any of the bottled gases.

This unit is being offered as replacement unit for water heaters now in service, and an attractive proposition is open to manufacturers of hot water heaters who adopt this burner as standard equipment and purchase in quantities.

This is one of a large line of burners which we manufacture for domestic, commercial and industrial application. If you have any problems pertaining to the combustion of gaseous fuels our engineering staff is at your command.

We are prepared to design and install industrial butane standby plants, public service gas plants, as well as automotive and stationary engine conversions. Your inquiries are solicited.

RANSOME COMPANY

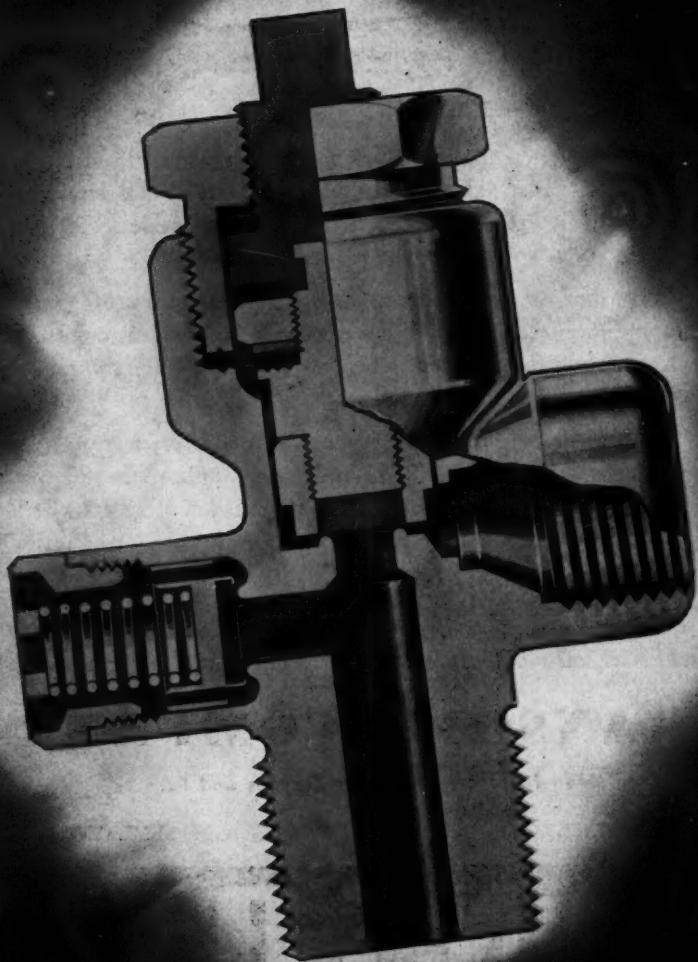
Manufacturers of Forster Torches and Burners

4030 HOLLIS STREET

EMERYVILLE, CALIF.

RANSOME

EXTRA PROTECTION PERFORMANCE PROFITS . . .



FROM REGO CYLINDER VALVES

The advanced leadership of Rego engineering has been giving the Butane-Propane industry, since its infancy, extra protection . . . extra performance . . . extra profits. **HERE'S WHY . . .**

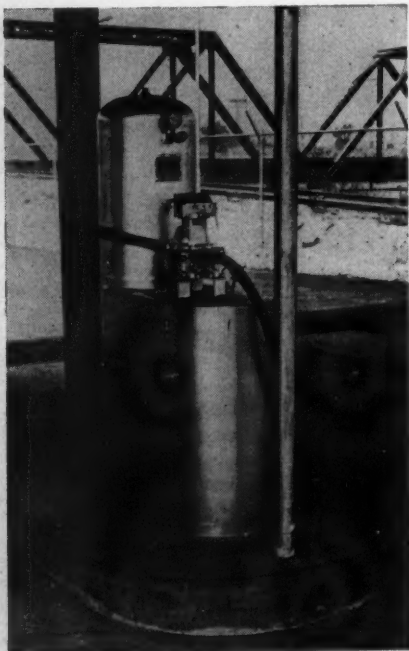
- **LEAK-PROOF DIAPHRAGMS** — Exclusive design incorporates diaphragms of flexible composition giving long life and allowing for unrestricted movement of valve seat.
- **POSITIVE FULL OPENING** — Valve seat disc holder and stem are attached to diaphragm. There is no dependence on springs to effect full opening.
- **TIGHT CLOSING** — Seat disc of a resilient composition assures positive shut-off.
- **"POP" ACTION SAFETY VALVE** — This feature assures full relief of excessively high pressures due to overfilling or fire.
- **EASILY MAINTAINED** — All parts subject to wear or fatigue can be easily and inexpensively replaced.
- **CAREFULLY SELECTED MATERIALS** — All materials used in the construction of these valves resist the action of butane and propane in both the liquid and gaseous phases.

Assure utmost safety and economical operation by specifying Rego cylinder valves.

The **BASTIAN-BLESSING** 
258 E. ONTARIO STREET CHICAGO, ILL.
Pioneers in equipment for using and controlling high pressure gases.

Underground Dispensing Station Will Fuel Municipal Trucks

WITH work finished early in September on the 7000-gal. butane dispensing station for the City of Los Angeles, the use of this modern fuel on city trucks came a step nearer completion, and helped to emphasize again the rapid growth of butane for com-



Close-up of complete dispensing unit capable of pumping 35 gals. per minute. This is one of two such units available to supply butane to the fleet of Los Angeles City refuse trucks that will eventually be equipped with butane equipment.

mercial transportation in this country.

The installation of butane on trucks of the city refuse department began one year ago when several different makes of carburetors were put into operation as test units. Tests were so successful that city officials now plan to go 100% butane for that department and the installation of carburetion equipment will go forward as rapidly as possible.

The contract for the installation of dispensing equipment at the city yards on East Washington Blvd. was awarded to Butane Ltd., manufacturing engineers, Los Angeles. The butane station now in operation offers facilities for the fleet of trucks that will eventually require fuel each day.

The dispensing system is of complete new design, according to Charles Wright, consulting engineer of Butane Ltd., who states that it is the first underground liquid dispensing system of its kind ever installed, though the principal it involves is far from new with his company. However, it includes a number of new safety features. The unit was registered in 1933. Other large installations using this principle include the U. S. Navy job on San Clemente Islands, Consolidated Air Craft Corp., of San Diego, and Municipal Central Plant, Hatch, N. M.

In discussing the project Mr. Wright stated, "In this system the fuel is transferred from underground

A ROCHESTER GAUGE GOES ON EVERY L.P.G. SYSTEM WE INSTALL!



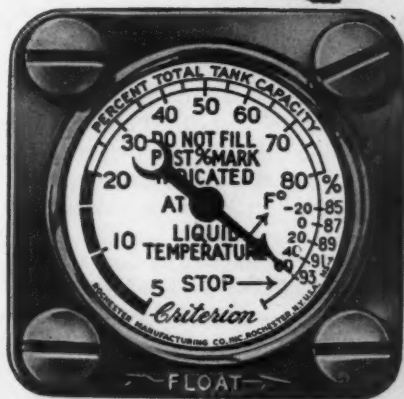
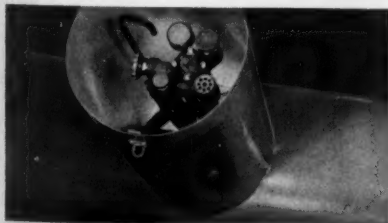
... Say Dealers and Distributors in This Fast-Growing Industry

... "We feel that we are rendering customers an extra service and doing justice to our equipment. That's why we install a Rochester Criterion Gauge in EVERY L.P.G. tank. Delivery men and customers alike appreciate the convenience and value of these dependable, easy-to-read Gauges because they tell accurately "at-a-glance" the total tank contents at all times."

MANUFACTURERS! Write today for complete information about these **LOW-COST, Easy-To-Install Gauges.**

ROCHESTER MFG. CO., INC.
17 Rockwood St. Rochester, N. Y.

(Below) Rochester Criterion Gauge as installed in Hydro Gas systems manufactured by **SOUTHERN STEEL CO., DALLAS, TEXAS.**



- Permanent magnet pointer control—no packing glands • No opening through Gauge head into tank • No fuel waste when in use • No keys or wrench required when reading • Dial accurately indicates amount of fuel in tank in terms of percentage of total capacity • Red area on left side of scale warns user when fuel needs replenishing • Listed as Standard by Underwriters' Laboratories.

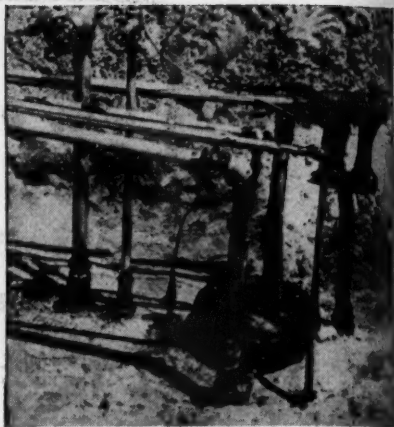
ROCHESTER *Criterion* GAUGES

to the dispenser with an internal heat exchanger operated with hot water, produced by a small butane flame. The actual butane in contact with the heat exchanger at any time is less than one-half gallon but this unit will build any desired gas pressure in the tank without increasing the temperature of the main body of liquid butane."

Another feature of the installation is that there is no pit housing the valves or pumps. All valves are underground and are fully automatic, except the filler and vapor return valves used in filling the storage from the transport tank. These are visible.

There is no gas vented to the air at any time during the filling operation. When the load has been dumped from the transport truck, two valves are opened which vent all gas in the hoses through a stack 20 feet above the ground. When the pressure has been released the air vacuum (siphon) is turned on in the vent stack; then the hoses are broken at the truck tank. The vacuum sucks the gas from the hose, blowing it out and leaving no drifting gas to create a fire hazard.

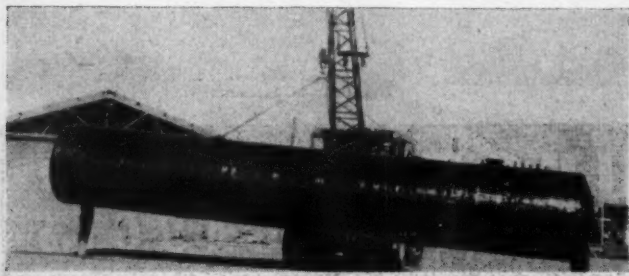
Explaining the two meter dispensers that will pump butane to the large fleet of city trucks, Mr. Wright stated, "One of the pumps has a 1 1/4-



Pipe line layout, showing internal heat exchanger used for moving fuel from storage tank to dispensing units.

in. liquid line and a 1/2-in. vapor line running into it from the main storage tank. A single hose runs from the meter to the truck tank that is being filled. There is no vapor return line from the truck tank to the dispenser.

"The tank to which the meter is attached is a vapor eliminator. It is welded completely closed, but it contains automatic valves and controllers. Its functions are three. First, all vapors are separated and sent back to the main storage tank and liquid



A 7000-gal. storage tank, coated and ready for underground installation. The crane makes it easy.

Insist on

BU-GAS

REG. U. S. PAT. OFF.

Today's leading liquefied petroleum gas for heavy-duty internal-combustion engines, industrial fuel requirements, and heavy-demand domestic heating.

FIRST to make Butane generally available for commercial purposes, Standard Oil has ever since kept BU-GAS *first* in:

Quality. BU-GAS insures uniform performance through adjustments for seasonal conditions. It is non-corrosive and moisture free.

Availability. BU-GAS is manufactured and available for delivery at six refineries. Ample tank-car equipment assures prompt shipment.

Distribution. BU-GAS Distributors operate the largest fleet of high-pressure tank-trucks in California, Arizona and Nevada, assuring prompt deliveries any time, anywhere.

Development of Equipment. BU-GAS Distributors and Standard Oil's technical experts have always lead in the development and installation of utilization equipment.

For prompt deliveries and further information call any of the following authorized distributors

Ransome Company: Emeryville, Sacramento, Selma and Redding, California. Reno, Nevada.

Frank Hennessy: San Jose, California

Petrolane Ltd.: Bakersfield, California

Crook Company: Los Angeles and El Centro, California

Frank H. Bagley: 29 Palms, California

Windolph Bros.: Santa Ana, California

Fannin's Hardware: Phoenix, Arizona

Home Ice & Fuel Co.: Tucson and Wilcox, Arizona

Foster & Long: Safford, Arizona

A. & B. Schuster: Holbrook, Arizona

Northern Butane and Plumbing Co.: Prescott, Arizona

Matlock Electric Supply: Globe, Arizona

STANDARD OIL COMPANY OF CALIFORNIA

forced through the meter. Second, if the liquid level in the eliminator drops within 6 inches of the liquid outlet to the meter an internal valve automatically shuts off the liquid to the meter until the liquid level has raised. The valve opens again, allowing the flow of liquid to the meter. Third, the valve controls the volume of liquid that can pass through the meter and is adjustable from 5 to 60 gallons per minute. This valve will shut off automatically in case of any fracture of hose, meter, valves or fittings. This same system has been in use in San Diego since 1934 and will pump from one quart up by weight accurately.

System Is Automatic

"The second dispenser at the Los Angeles yard has the same liquid and vapor inlet but in this one there is an electric pump. The heat exchanger actually forces the butane from 12 feet underground to the second dispenser and then the pump creates an additional pressure necessary to return the gas vapor from the eliminator back to the vapor portion of the storage tank. It is all automatic and all the operator does is connect the single hose to the truck tank, then pull the hose, which starts the pump and the meter. When the tank truck

is full the operator lets loose of the hose, the dispenser ceases operation, and the hose is uncoupled."

The city's butane-equipped units will include trucks used for the hauling of garbage, cans and other refuse. Trucks range from 1½ to 2 tons with dump bodies. Fords and Chevrolets are used at present.

Greater Economy Demonstrated

Tests made on the units already in operation have shown a considerable saving, it is reported. The trucks average about 1000 miles per month and use about 200 gallons for each unit. With a large price differential between gasoline and LPG, there will be a saving on fuel, alone. The saving on oil and maintenance will, of course, reach a considerable amount.

"Butane power" has already proved itself for Los Angeles City on this large fleet of municipal trucks. The significance of such an installation was indicated recently, when a city employe expressed his opinion about the present change-over to butane by saying, "This one department, as far as butane goes, is a testing job for the entire city. Other city departments are watching the results and it is probable that they will all install the fuel eventually."

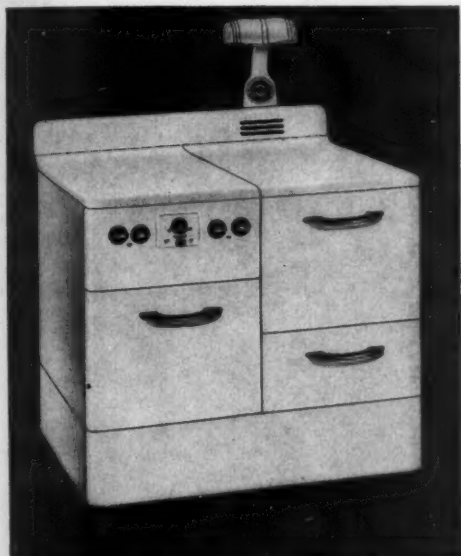


The two dispenser units and part of parking sheds at the Los Angeles City shops of the refuse department.

FLORENCE *gives you this* **OUTSTANDING PROMOTION MODEL** *for the Big LPG Market!*

You can sell this Florence Range at an extremely favorable price and give your customers a top-ranking value!

For this trim model is built with the same care and skill that builds every Florence Range. It's a beautiful range—in white porcelain and baked-on enamel with a smart black set-back base. It has "focused heat" burners with automatic flash lighters, a big, fully insulated oven, drawer-type broiler, a Robertshaw thermostat. These are *big* features on a promotion model!



There's a Florence Gas Range to meet the need of *every* one of your prospects—from promotion models up to the magnificent de luxe ranges that head the line. Mail the coupon today!

FLORENCE STOVE COMPANY

General Offices and Plant, Gardner, Mass.; Western Offices and Plant, Kankakee, Ill.; Sales Offices: 1458 Merchandise Mart, Chicago; 45 E. 17th Street, New York; 53 Alabama Street, S.W., Atlanta; 301 N. Market Street, Dallas; and 2730 16th Street, San Francisco.



FLORENCE STOVE COMPANY

Please send me the Florence Gas Range Catalog, prices, and full information about the liberal Florence Promotion Plan for Dealers.

Name

Address

FLORENCE *Gas Ranges*

FOR LIQUEFIED PETROLEUM GAS

OCTOBER-1940

TABLE 1. EXPORTS OF LIQUEFIED PETROLEUM GASES, 1937-1939*
(Thousands of gallons)

	Propane			Butane			Propane-butane mixtures			Total	
	1937	1938	1939	1937	1938	1939	1937	1938	1939	1937	1938
Countries of destination:											
United Kingdom .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
France .....	.....	.....	27	1,279	.....	539	22	.....	.....	1,301	.....
Italy	78	17	.....	.....	.....	.....	.....	.....	.....	78	17
Canada	66	151	267	229	235	153	.....	.....	.....	295	386
Mexico	1	19	1	209	382	516	43	.....	.....	253	401
All other countries	14	21	67	.....	.....	.....	42	.....	.....	56	21
Total	159	208	362	1,717	617	1,208	108	.....	.....	1,984	825
											1,570

* Figures for 1939 subject to revision.

By A. T. Coumbe, Associate Economic Analyst, Petroleum Economics Division, A. G. White, Chief Economist.

Table 1 is a "breakdown" of shipments to foreign countries of liquefied petroleum gases in the years 1937-1939, and completes the 1939 sales analyses of the U. S. Bureau of Mines. The details of sales within the United States, segregated into domestic, gas manufacturing, industrial, chemical manufacturing, internal combustion engine and miscellaneous uses, with comparative figures for 1938, were published in the August issue of BUTANE-PROPANE News, pages 9-13.



"HEATWAVE"

A Complete Line for the
L.P.G. INDUSTRY

Designed "from the ground up" to bring to the L.P.G. Industry the famous "Heat Trap" and other exclusive features which have made "Day & Night" Heating Appliances the standard of economy, efficiency and long life in the Gas Industry ... PLUS specially designed burners and controls to meet the specific requirements of Liquefied Petroleum Gases.

*"DAY AND NIGHT" CONSOLES
RADIATE AND CIRCULATE HEAT
with the "Thermosite"-treated "Heat
Trap" and "Radiator"*

The Heat Trap Element with its "Thermosite" treatment is located so as to radiate heat through the upper louvers as well as the lower "radiator," thus providing radiant heat throughout the "living zone" plus circulating heat which assures even distribution.

CHOICE OF CONTROLS

3 Types of Controls are available to suit customer's preferences. Controls are easily interchangeable.



FORCED AIR FAN UNIT OPTIONAL

WRITE FOR SPECIFICATIONS AND PRICES

DAY & NIGHT Manufacturing CO.

MONROVIA, CALIFORNIA

WAREHOUSE STOCKS AT CONVENIENT SHIPPING POINTS



"HEATWAVE"
FLOOR FURNACE
4 Sizes



LECTRO-GLO
WALL HEATER
2 Sizes



"HEATWAVE"
WATER HEATER
3 Models

BUTANE *Power*

AUTOMOTIVE DIRECTORY

- Do you operate a butane filling station for automotive equipment? If so, list its name and address in the National Directory being compiled by this magazine. There is no charge. Send full information, including highway, address, and name of manager or owner, to BUTANE-PROPANE News, 1709 West 8th St., Los Angeles, Calif.—Editor.

Japan Attracted to LPG For Automotive Uses

Gasoline-saving Japan has become interested in the use of liquefied petroleum gas for motor cars so that the available supply of gasoline can be directed into the channels of war. The government is making an extensive survey of the fuel and the extent of an available supply.

It is said that more than 100 cars in northern Japan have been converted to use butane-propane mixtures, and petroleum companies are preparing to manufacture it on a large scale basis soon.

New Company Will Represent Butane, Ltd., in Texas

Butane Ltd. of Texas, with head offices in Dallas, is now operating throughout the state for Butane Ltd., parent firm, whose headquarters are in Los Angeles. The new company will be directed by Florence B. Tuck, of Los Angeles, and Oliver A. Somerill and C. A. Rhodes, of Dallas.

Mr. Rhodes was formerly engaged in the trucking business and is well known to truck operators throughout the Southwest. He and his associates will sell au-

tomotive butane equipment and butane dispensing units. They will also make installations of dispensing units.

The Texas company is an addition to the list of other Butane Ltd. dealers that may be found in many sections throughout the Southwest. The Los Angeles firm also announces that they are now jobbers for the Pyramid butane carburetor and will distribute it through their dealers.



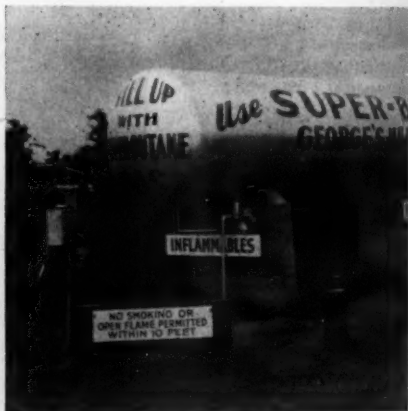
Engine Use of Butane Growing in Midwest

As the use of butane for automotive purposes grows in the Midwest, new filling stations are increasing in numbers.

One of these is the recently completed dispensing unit that has been installed on Highway No. 70, three and one-half miles out of Little Rock, Ark., on the road to Memphis. (Photo below.)

This station is operated by Sam Stephens and was erected by George's Heating & Appliance Co., of 313 North Main St., Little Rock.

The tank is of 3000-gals. capacity and the plant is modern in every way.



Here trucks and tractors can fill up on butane. It is the dispensing station and bulk plant of George's Heating & Appliance Co. on the Little Rock-to-Memphis (No. 70) highway.

Large Diameter Manifolds Best

TO burn gasoline in an internal combustion engine it is necessary to mix it with the proper proportion of air and introduce it into the engine cylinders on the intake stroke. This operation requires a carburetor and a manifold.

To mix a liquid with air in the correct proportions is a rather difficult metering job. It is accomplished by the use of jets in the carburetor venturi throat where the liquid is atomized to a certain extent and mixed with the air.

The mixture as it leaves the venturi throat is a fog of small liquid particles and air.

To provide for further breaking up of these particles there is a heater on the manifold that tends to vaporize the liquid particles to make a more nearly perfect mixture.

To deliver this mixture in even proportions to each cylinder the manifolds are usually built so the distance between the inlet from the venturi mixer to each cylinder intake is approximately the same distance.

To prevent the pre-mixed air and liquid from separating in the manifold the diameter of the manifold is kept small to increase the velocity.

In some engines other restrictions are placed in the inlet to the cylinder to further increase the velocity so the charge will be carried across the cylinder.

When changing an engine over to

operate on either LPG or natural gas, the manifold design that is of benefit for handling a liquid fuel becomes a detriment for handling a gaseous fuel.

When the LPG vapor is mixed with air in the venturi mixer, a complete mixture of two gases can be obtained.

If the heater is allowed to remain on the manifold, both the air and gas are expanded due to temperature rise and a given volume of the mixture contains less B.t.u.'s of fuel.

When Friction Drop Is Increased

If the small diameter manifold is used, the friction drop between the venturi mixer and the cylinder inlet is increased, as a given number of B.t.u.'s of fuel in the gaseous form will take up nearly 30 times as much space as the atomized liquid fuel.

If deflectors into the cylinder inlets are used, additional restriction is set up.

The result of the combination of these items is the starving of the engine, resulting in loss of power and increased fuel consumption.

For the best operation on LPG fuel a large diameter, cool manifold should be used.

To illustrate an extreme example of the results that can be obtained by changing manifold conditions, attempt to convert a kerosene burning tractor engine with a fully heated manifold to operate on LPG without changing the manifold. On some models hardly enough power can be developed to pull the tractor without a load. Then replace the manifold with one that has no heat on it and the engine will

out-perform kerosene or gasoline operation.

As a further illustration, take an engine with a high velocity manifold that is getting good gasoline mileage and convert to LPG without changing the manifold and check fuel consumption and power. Replace this manifold with a large diameter manifold, fully removed from the exhaust manifold, and notice results.

These are extremes. In between, conditions will often be found that are the cause of lack of power or poor fuel economy, but not enough to prevent fair operation.

To get the best out of LPG, manifolding should be checked and corrected if necessary.

Salinas, Calif., Has Modern Butane Plant for Trucks

The Barrett Butane & Equipment Co., of which O. T. Barrett is proprietor, has recently completed a modern showroom for the display and sale of butane appli-

ances and equipment and a service department for greases and oils in Salinas, Calif. The firm has been established there for two years and a similar plant is maintained in Boulder Creek, Calif.

The buildings and butane dispensing pumps are located on the property so as to provide ample space for long trucks, with trailers, to park while taking on fuel. (See photo on this page.)

The 4000-gal. bulk plant, the new showroom and the shop represent an investment of \$5000. In addition to serving domestic customers and automotive equipment, this company makes engine conversions and maintains a service for butane trucks. Salinas gets a heavy butane trucking traffic and LPG-equipped tractors are widely used in that district.

L. C. Arter Joins T-V Supply Co.

L. C. Arter, who has been associated with the Ensign Carburetor Co. for 17 years, has joined the T-V Supply Co., of Wichita, Kan., which handles engine equipment, meters and pumps, according to M. O. Tanberg, writing from company headquarters in Wichita.

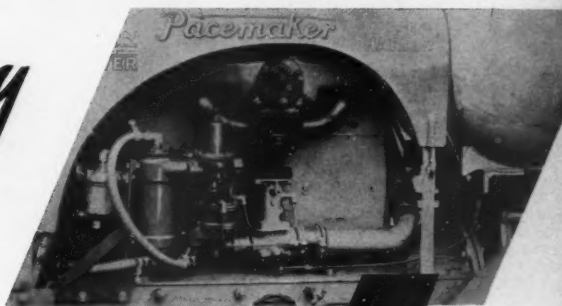
Mr. Arter will devote the larger portion of his time in the company's Missouri-Illinois territory.



O. T. Barrett has provided ample room for trucks and trailers when fueling with butane at his Salinas, Calif., station.

ENSIGN BUTANE CARBURETION

Economy for **TRACTORS AND TRUCKS**



The advantages of Butane for tractor and truck use are low fuel costs plus definite reductions in engine maintenance, oil consumption, etc. • Butane, properly carburetted, burns clean and dry without carbon or crankcase dilution. ENSIGN

Carburetion equipment is accurately designed to obtain the most from Butane and to meet every engine need with extra performance in power and economy of operation. Consult us for complete details.



ENSIGN

CARBURETOR CO., LTD.

HUNTINGTON PARK, CALIF. • DALLAS, TEXAS • CHICAGO, ILL.

Magnesium Heated to 750° with LPG

LIQUEFIED petroleum gas added a new job to its growing list of industrial triumphs, recently, when the Paulson-Nardon Machine Works, Los Angeles, turned to propane to accomplish a job that electricity and natural gas had failed to do as economically and as efficiently.

This southern California firm is at present under contract to furnish many vital parts to aircraft factories for the construction of planes. Most of this equipment is in great demand by all the factories and must be available when needed.

One of the most necessary parts for aircraft production now being turned out by the Paulson-Nardon shops is a

small conduit box pressed from sheet magnesium. The machine by which the boxes are pressed is one of but few in the country and is believed to be the only one of its kind on the Pacific Coast. (See Fig. 1.)

Thus, its continual operation is very important as production has to be guaranteed. In order to do this and keep the cost within a reasonable figure, the firm employs bottled gas to do the job.

The stamping machine, called a "waffle iron" by the trade, is built along the lines of any press used for the stamping of metal trays from flat sheets. A bottom, or stationary plate, makes a table for the sheet of mag-

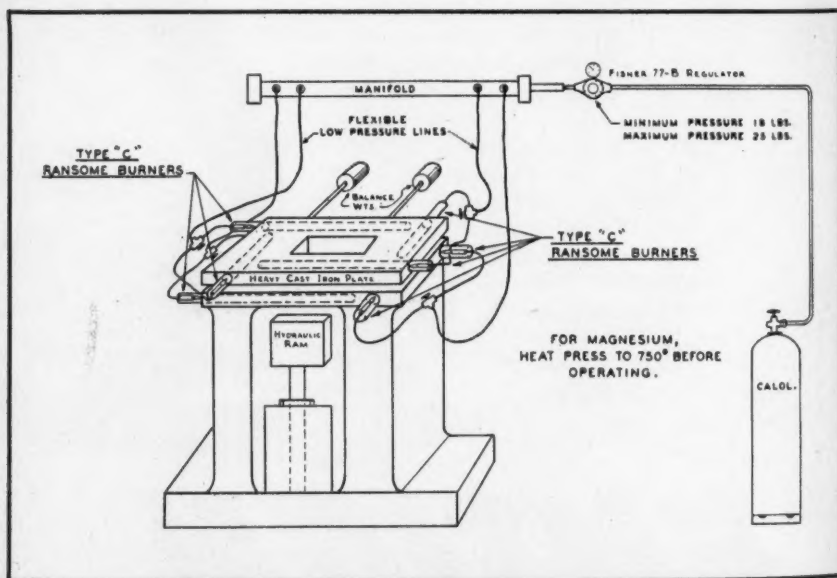


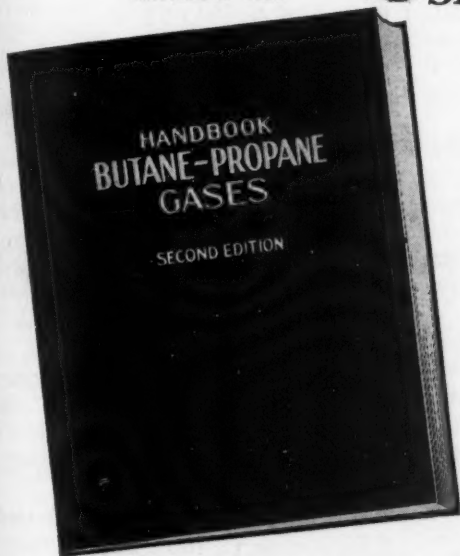
Fig. 1. The "waffle iron" stamping machine for magnesium product.

Handbook BUTANE-PROPANE GASES

Latest Revision
November 1938



SECOND EDITION



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BUTANE-PROPANE
News

1709 West 8th Street, Los Angeles, Calif.

nesium. An upper plate swings up and down on a large hinge, like a waffle iron, and is brought to rest on top of the sheet, where it is securely clamped when the hydraulic ram comes up from the bottom, thus forcing the magnesium sheet through the die to form the desired shape.

In the center of both the upper and lower plates is a square hole, through which the plunger enters when the box is pressed. Fitted to each plate is the regulation die that controls the size and shape of the box. Several sizes are available for the stamping of the various sized boxes.

The stamping of magnesium differs from boxes made of other metals in that a high, uniform temperature must be maintained if the plate of metal is not to be ruptured. It is here that the heating process becomes the important part of the operation. A temperature of 750°F. must be held on both plates, uniformly, whenever the machine is in operation and the heating must be done quickly. It is recognized that LPG gives a faster and more intense heat than any other commercial fuel.

Electricity Failed To Make Good

The machine now in operation was originally equipped with electric coils. Four of these coils were mounted in openings cast on the inside of each plate. Thus, eight coils were used, at a cost of about \$125 per set. It was found that several of the coils burned out after a few hours work. They were also slow in heating the plates to the required temperature. Power costs were also very high.

When electricity failed to do the

job economically and efficiently the owners decided to try natural gas. It was soon found, however, that natural gas, at 1100 B.t.u., would not produce sufficient heat. When air pressure was used with natural gas an excessive fire hazard was present. The heat became so great on the outside of the machine, due to flame belching from the burners, that men could not get near enough to operate efficiently. For a time special asbestos suits were worn by the workmen, making the job more expensive and increasing production time.

Propane Chosen for Fuel

When all other available means of heating had been tried and discarded, engineers turned to liquefied petroleum gas. It was decided that propane, in regulation cylinders, was advisable for use, and that special burners should be employed on the job.

To install the equipment for the use of LPG on the "waffle iron," the owners called in E. E. Tattersfield, of the Electric and Carburetor Engineering Co., Los Angeles.

For burners Mr. Tattersfield used Forster, type C, torch burners, manufactured by the Ransome Co., Emeryville, Calif. The burners were mounted with special brackets at the opening of each hole in the plates—eight, in all. A Fisher regulator, type 77B, was used for controlling the fuel running to the burners. The company chose Calol, manufactured by the Standard Oil Co. of Calif., for fuel.

The LPG equipment was attached by tubing and flexible hose to the propane supply, the torches were lighted

and the heating process began. It was found that the plates were brought to the desired 750° heat in about one-half hour. It was also found that the required heat could be maintained with far less flame than with the other fuels named and could be kept at a more even temperature.

Magnesium conduit boxes stamped since LPG was put into use are more uniform and the loss on ruptured boxes is negligible. Production schedules are now keeping pace with orders and plans for the installation of a second machine are underway. One fact is certain, say company engineers, "the new machine will be equipped with LPG from the start."



Fresno Chosen for Next Meeting Of California I. A. C.

The next meeting of the California Industrial Accident Commission will be held in Fresno, Calif., on Oct. 1-2 in the court room of the Fourth District Court of Appeals, Pacific Southwest building. The Oct. 1 session will open at 2 p. m., and that of the following day at 9 in the morning.

The commission, under the chairmanship of C. H. Fry, has been meeting during the last several months with representatives of the liquefied petroleum industry in an effort to revise the California safety orders so that they will better meet the changing conditions and conform more accurately to the welfare of the public and the dealers alike.

The final draft of the safety orders, except for the sections on safety relief valves, vaporizers and burning systems, will be presented at the Fresno meeting. Copies have been mailed out to the industry and any recommendations for changes should be presented in writing.

The meetings are open to the public. When the code revision is made it will be printed and made generally available.

QUALITY PRODUCT

**PROPANE
BUTANE
OR
MIXTURES**

Philgas believes that there is no substitute for a full measure of quality in every gallon of product it produces or sells.

Philgas products are sold on what are probably the most complete and most rigid quality specifications in the liquefied gas industry. **YOU** can benefit by buying *assured quality* from Philgas.

Philgas
DEPARTMENT

**PHILLIPS PETROLEUM COMPANY
GENERAL MOTORS BUILDING
DETROIT, MICHIGAN**

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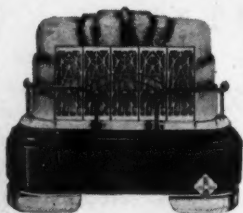
BARTLESVILLE, OKLA.

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OF LIQUEFIED PETROLEUM GASES**

GAS-RAY HEATERS

The popular priced quality line for burning liquefied petroleum gas. Appealing designs and finishes make Gas-Rays the year's fastest moving line, with good profits for dealers.

1790 B Radiant Heater



Well made for long, satisfying service. Modernistically designed — an attractive addition to any room or office. Finished in rich brown vitreous enamel with mottled tan trim to harmonize

ize with the radiants and glazed backwall. Hearth, dress guard and tubular legs chrome finished. Two sizes 20,000 and 24,000 B. T. U.

1900 B Radiant Circulator

Combines the best features of both types of heaters. Excellent combustion—odorless. Protected 1-piece ceramic heating element. Finished in walnut brown vitreous enamel with tan mottled trim. Top center ornament finished in durable chrome. 19" high, choice of three widths, 12", 15" and 19" (14,000, 18,000 and 28,000 B.T.U.) AGA approval.



In the complete Gas-Ray line there are many styles—every one a big value—sized from 10,000 to 28,000 B. T. U.

Send for illustrated literature and attractive dealer discounts. Address Dept. BP.

ARMSTRONG PRODUCTS CORP.

Quality Appliances Since 1899
Huntington, W. Va.

Midwest Sectional Meeting Opens Sept. 30 in Omaha

Omaha, Neb., is the meeting place for the annual Fall convention of the Midwest Section of the Liquefied Petroleum Gas Association. The session will run through Sept. 30 and Oct. 1 under the chairmanship of Charles O. Russell, of the Thermogas Co., Des Moines, Iowa. Other officers are N. A. Evans, Pressed Steel Tank Co., Milwaukee, vice president, and Harris A. Goodwin, The Bastian-Blessing Co., Chicago, secretary.

Francis McCahill, Home Gas Co., Minneapolis, has directed arrangements for the program, upon which will appear members of the industry with papers covering a wide range of industry activities.

Convention headquarters will be at Omaha's Fontenelle hotel.

Two 15,000-Gal. LPG Bulk Plants Opened by Eastern Distributors

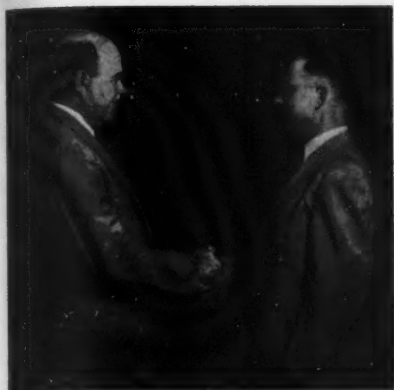
Two new bulk stations being built and to be operated by distributors of Essotane will be opened within the month. H. W. Wageley, of Charlestown, W. Va., has completed a station of 15,000 gals. propane capacity, and The Chesapeake Gas and Equipment Corp., of Easton, Md., is now constructing another 15,000 gal. plant at Seaford, Del.

Plant layouts in both instances were prepared under the direction of John B. Clark, of Standard Oil Co., of New Jersey. The fuel is handled by Moyno pumps; and the tanks were constructed by the American Car and Foundry Co.

Liquid Gas & Appliance Co. Established in Twin Falls

Twin Falls, Idaho, is the center of a comparatively new liquefied petroleum gas market that is being covered by the Liquid Gas & Appliance Co. A large bulk plant, tank truck and bottled gas delivery and service truck are operated by the company.

Underground gas systems are installed for those who want larger supplies of fuel than handled by bottled gas installations.



Both L. J. White, vice president of Southern Steel Co., and Frank DeLarzelere, Southern Gas & Equipment Co., seem perfectly satisfied over their agreement for a territorial franchise covering seven Southern states and an initial order for 6492 Hydro-Gas butane systems.

Frank DeLarzelere Organizes New Company in Arkansas

The Southern Gas & Equipment Co. is the name of a new company that has been organized by Frank P. DeLarzelere and associates, and through purchase is successor to the DeLarzelere-Petty Butane Equipment Co., Inc., of Memphis, Tenn. Headquarters are located at 337 Gazette Bldg., Little Rock, Ark.

The new company is capitalized at \$50,000, with \$20,000 paid in. Officers are: Frank DeLarzelere, president; J. L. Riley, Atlanta, Ga., vice president; and James G. Kenan, also of Atlanta, Ga., secretary-treasurer.

In announcing the entry of the new concern into the liquefied petroleum gas field, Mr. DeLarzelere states that it "is representing the Southern Steel Co., Wm. B. Scaife & Sons Co., Goodall Rubber Co., and Smith Meter Co." Also, that "we expect to open a branch office in Birmingham, Ala., to serve Florida, Georgia, Alabama, Mississippi, Tennessee and Kentucky." The Little Rock office will handle Louisiana, Arkansas and Missouri.



DEPENDABLE

Skellyfuel

(BUTANES & PROPANE)

SUPPLY

Skelly natural gas resources in Oklahoma, Texas, Arkansas, Louisiana, New Mexico and Kansas assure an unfailing supply of quality natural gas from which Skellyfuel (butanes and propane) is made. The Skelly pledge of quality combines with long experience to insure every marketer of butanes and propane an uninterrupted supply of the very best in this field.

EXPERT SUPERVISION

Skelly has the latest modern equipment in its natural gas plants. Specially trained chemists supervise the manufacture of Skellyfuel to make certain every order meets exacting specifications to fit your requirements.

CALL. WIRE OR WRITE.

SKELLY OIL COMPANY

TULSA, OKLAHOMA

KANSAS CITY, MO.



ANCHOR

IS YOUR LOGICAL

"Port O' Call"

FOR

BUTANE PROPANE

Would it not be of value to you to know of this dependable source of supply—IF OUR NEAREST SHIPPING POINT FOR TANK CAR OR TRUCK DELIVERY COULD LOWER YOUR DELIVERED COST—If our prices for highest grade products could be contracted at a saving to you—That we are in a position to meet your needs at a minute's notice?

WRITE OR WIRE US FOR QUOTATIONS.

ANCHOR

PETROLEUM COMPANY

Atlas Life Bldg., Tulsa, Okla.

Butane Has Edge On Gasoline

- H. V. SNODGRASS, sales manager, Century Gas Equipment Co., Los Angeles, in a paper entitled "The Advantages of Butane as a Motor Fuel," delivered before the Motor Vehicle Society in Los Angeles and under the auspices of the L. A. Automotive Works, Inc., presented many arguments to support his contention that butane excels diesel fuel for automotive uses. This is the last of three papers on similar subjects delivered at that meeting.—Editor.

THE cost of butane throughout southern and central California, is not in excess of 10 or 11 cents per gallon, including taxes. Larger consumers, who have their own storage and hauling equipment to fuel their automotive equipment at their headquarters, are purchasing butane as low as seven to eight cents per gallon, including all highway taxes.

Butane is approximately 100 octane rating, which is higher than ethyl gasoline. When you take this into consideration you can see that there is a tremendous saving if butane is compared with gasoline of similar qualifications. Also, there is a profitable saving if it is compared with gasoline of average octane rating.

Butane Saves Motor Wear

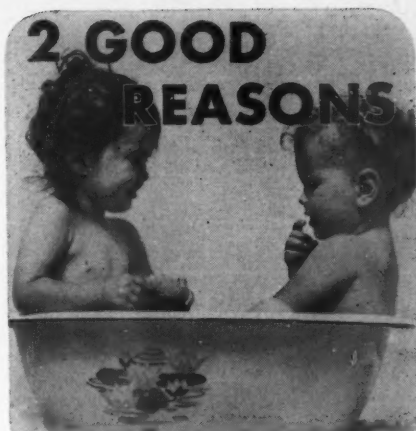
In comparing butane cost per gallon with diesel, we find the prices about the same, and in some cases diesel is less per gallon. When, however, we take into consideration other advantages butane has over diesel fuel,

we find that butane is actually cheaper in the long run. This is due to the fact that motors using butane show a much greater maintenance saving, since butane is burned as a dry gas instead of being injected into the combustion chamber in liquid form.

Better Control of Combustion Mixtures

Butane enters the heat exchanger, which is part of the carburetion conversion equipment, in liquid form. There it is expanded to a dry gas and enters the carburetor to be mixed with air to the proper combustion mixture. The fact that it is in a dry gas form, much the same as air, makes it possible to have better control of combustion mixtures. This means that the motor has a greater chance to burn more completely this type of fuel than any liquid type. A more complete combustion means elimination of heavy carbon deposits in combustion chamber and ring glands, which cuts down motor wear. Butane entering the motor in a dry form means that piston and cylinder wall wash is eliminated, allowing the lubricating oil to lubricate instead of being washed away. This feature alone makes it possible to increase the life of the motor by many thousand miles over other types of fuel.

There are trucks now operating out of Los Angeles that are pulling heavy loads and running in excess of one hundred thousand miles without removing the cylinder head, or grinding valves, or replacing piston rings. Motors operating under these conditions have been checked and the cylinder wall wear has been found to be from .005 to .010, and it has taken from



for Selling HOTSTREAM Liquefied Petroleum Gas WATER HEATERS

Hotstream offers a complete line of heaters specially designed for safe, economical operation with Butane and Propane. Here are 2 good reasons for handling them . . .

★**PROFITABLE SALES.** You can boost your profits by selling Hotstream Water Heaters.

★**LOAD BUILDER.** If your bottled gas customers do not have water heaters, you are losing out on volume. Water heaters are good load builders.

For complete information, prices and catalog, write to Hotstream or, in the South, to these representatives:

L. M. TAYLOR
3200 Main St., Dallas, Texas
W. G. BAKER, 820 Carondelet
Street, New Orleans, La.
R. O. FOARD, JR., 205 Walton
Building, Atlanta, Georgia



THE HOTSTREAM HEATER COMPANY

8007 Grand Avenue • Cleveland, Ohio

Truck Owners Turn to Algas For Profits . .

A unit at a time, and in entire fleets, trucks throughout the nation in ever increasing numbers are being converted to butane operation with Algas Butane Carburetion.

Truck owners want lower operating costs. They have investigated and turned to Algas Butane Carburetion because:

It costs little to convert a truck to butane with Algas Carburetion.

The investment in a new engine complete with Algas Butane Carburetion is far less than the cost of a diesel engine.

Algas Butane Carburetion on an engine delivers same horsepower as a diesel engine, but weighs much less and increases pay load.

Tremendous savings in engine maintenance, fuel and oil costs are possible with Algas Butane Carburetion.

Let us send you literature giving full details.



American Liquid Gas Corp.

1109 Santa Fe Avenue.
Los Angeles, Calif.

**AUTHORIZED DEALERS NOW BEING
SELECTED IN MANY LOCALITIES.**

.003 to .005 to reface valves.

The fact that oil dilution is eliminated increases oil life from three to five times that of oil used on motors burning liquid fuel. When an operator changes to butane fuel it is advisable to instruct him to notify the oil company from which he is purchasing motor oil, and have them supply an oil that they recommend for motors using butane fuel.

Larger Payloads Possible

Butane has the characteristics which make it possible to raise the motor efficiency by increasing the compression ratio and cooling the intake manifold. When this is done the motor works under higher pressures at the time when combustion takes place, which increases the horsepower and enables the equipment to haul larger pay loads.

The characteristics of butane are such that it is a slower burning fuel than gasoline, which permits the engine to lug longer on a hard pull, giving somewhat the effect of steam-engine performance.

However, the fact that the ignition point of butane is higher than the ignition point of gasoline means that the ignition system of coils, condensers and plugs should be of the highest type and test to obtain best performance where butane is used as a motor fuel. This is also very necessary to get the best results where ignition has to work under higher compression pressures.

The slower burning rate of butane permits advance of motor timing without causing the motor to knock or run rough, as it would do on gasoline

fuel. It would be difficult to state just how many degrees advance the motor will stand over normal fuel advance. It is recommended, however, that if when the motor is idling the spark is advanced to the point where the idle becomes rough and is then slightly retarded, best results prevail.

In most cases engines using butane for motor fuel, idle at a higher r.p.m., owing to advanced spark setting.

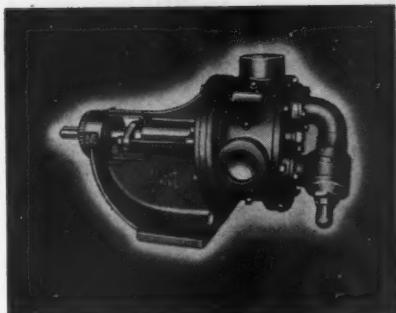
Engines using butane as a fuel usually operate under higher pressures which aids scavenging, leaving lesser quantities of the product of combustion to foul the incoming charge.

Motors Run Cooler

Motor temperatures usually run lower owing to the fact that more complete combustion is obtained. Also, the higher compression pressures give greater fuel efficiency with more B.t.u.'s converted into power and less dissipated into the water jacket.

Experience has taught us that the heavier the equipment and loads, and the nearer to full throttle that engines are operated, the better are the opportunities for economy.

Experience has also shown that while butane gives an adequate performance on the lighter tasks, such as automobiles, light delivery trucks, etc., it is on the big jobs that it really comes into its own. The heavier the load to be handled, the tougher the field to be plowed, the harder the climb to be made, and the more profitably butane performs. A wide open throttle on a heavy truck, with a maximum load, means a field day for butane. This should leave little doubt as to butane's value as a motor fuel.



It Was Built for BUTANE . . .

There's no "ifs" or "ands" about it—Viking built this pump for Butane-Propane Service. Every feature has been designed to do this particular pumping job better . . . extra long stuffing box, special packing, treated gaskets, relief valve on head, long bracket base, flexible casing.

This pump is compact and rugged—is offered in 20, 35 and 90 GPM. Bulletin 2300-39 gives complete specifications on this truck mounting model, plus detailed data on Viking's full line of Butane-Propane Pumps. Write.



Look for This
Trade Mark

The Sign of a
Genuine Viking

VIKING PUMP CO.
CEDAR FALLS - IOWA

IT'S A Beauty!



... and a "WINNER"
on PERFORMANCE!

"PACIFIC'S" new Thermolator has everything . . . beauty, efficient, economical performance and right price! Shown here is the vented Thermolator Model TV. Looks like a high-grade walnut radio cabinet. Other finishes optional at slight additional cost.

There's a big market for "Pacific" Thermolators which are made in a wide range of sizes in vented, gravity and fan-forced-air models. Let these popular heaters earn you good profits on installations in homes, auto courts, resorts, schools, and the many other "hot" prospects for LPG appliances of "Pacific" quality.

Write today for complete information on Thermolators . . . also the great line of "Pacific" Floor Furnaces, Wall Heaters, Central Heating Units, Water Heaters. Address Dept. BN-10.

PACIFIC GAS RADIATOR CO.
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Eastern Section Meeting In Winchendon, Mass., Oct. 14

The Eastern Section of the Liquefied Petroleum Gas Association has selected Toy Town Tavern, Winchendon, Mass., in the foothills of the picturesque New England Berkshires as the location for its annual Fall meeting to be held Monday, Oct. 14.

The pattern of the Fall meeting of the Association has always been one of a social gathering, with athletics and sports and the opportunity for informal discussion among members, and this procedure will again be observed this year.

A committee consisting of William Hauck, Chairman of the Eastern Section, assisted by F. H. Frost and W. A. Sigfried, has charge of all arrangements, and has extended a special invitation to LPG dealers and distributors in New York and New England to attend the outing whether or not they may be members of the Association. Representatives of equipment and appliance manufacturers must be Association members, however, to be eligible to participate in the festivities.

Winchendon, Mass., is 60 miles south of Boston, 70 miles north of Pittsfield and about 240 miles from New York City. It is located on U. S. highway No. 202 and can best be reached by car, as train and bus connections are not very satisfactory.

The tickets at \$4 each, will entitle those attending to participate in all the sports, and the fee also covers cost of both luncheon, dinner and refreshments. For those who may desire to try out for the 18-hole golf championship, there will be an additional green fee of \$1.



Ruud Manufacturing Co. Opens New Factory Building

The Ruud Manufacturing Co., Pittsburgh, and Bartlett & Co., distributors of Ruud and Welsbach water heaters, have recently occupied a new Ruud factory in Philadelphia at 3112 N. 17th St.

The establishment of the new headquarters for both firms is intended to improve service to utilities and dealers along the Atlantic coast.

N. G. A. A. Adopts New Specifications for LPG

Specifications and test methods for liquefied petroleum gases have been adopted as tentative standards by the Natural Gasoline Association of America through its board of directors, effective as of Sept. 1.

These standards were submitted to the Association at its May meeting through C. R. Williams, Continental Oil Co., chairman of the technical committee (see complete form in BUTANE-PROPANE News, July, 1940, pp. 23-24), and only awaited the acceptance of the directors to make them official.

Originally set up in 1931, these specifications adequately served the industry during the intervening period. However, growth of the industry and the broadening use of liquefied petroleum gases brought a need for some modifications in the standards. A series of research studies by the technical committee brought forth the revisions which have now been adopted.

Tulsa, Okla., Gets New Liquefied Gas Firm

A new Tulsa, Okla., business is the Northeastern Oklahoma Liquefied Gas Co., recently chartered by the state as a \$10,000 corporation, to sell propane gas and appliances for its use in heating and cooking. Mark S. Patton is president, and H. J. Porter, vice president and sales manager.

The company will have sales agents throughout northeast Oklahoma, and will open Tulsa offices and sales room at an address yet to be announced.

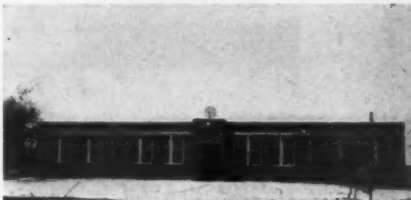
J. C. Viator Makes Conversions

J. C. Viator, located three miles west of Pittsburg, Calif., on the Martinez highway, is now equipped to make butane conversions on automotive equipment. He also has a dispensing station and a mechanic on duty who can service butane-powered trucks.

CLOW

GASTHEAM RADIATORS combine

the **SUPERIORITY** of radiator heating
the **FLEXIBILITY** of individual heaters
the **CONVENIENCE** of butane gas



A 6-Room and Auditorium School near Lubbock, Texas.

CONSTRUCTION

Walls—13-in. brick and tile
Wood floors Celotex ceilings

SIZE OF BUILDING

Cubical content 73,570 cu. ft.
Floor space 6,440 sq. ft.

HEATING SYSTEM

17 Clow Gastheam radiators—1,408 sq. ft. steam

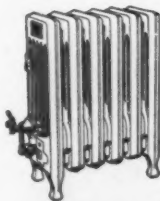
BUTANE CONSUMPTION

Season 1939-40—3,110 deg. days—2,478 gals.

HEATING REQUIREMENTS

3,200 degree days normal.

Radiation sized for 0° F. outside temperature.



Each radiator makes its own steam heat with gas.

No basement, boiler or steam piping used.

For Heating a Single Room
or An Entire Building

JAMES B. CLOW & SONS

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Buy the Line That Sells
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**RADIANT HEATERS
CIRCULATORS
FLOOR FURNACES
HOT PLATES**

All especially designed for use on
Liquefied Petroleum Gases.

PEERLESS MANUFACTURING CORP.
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National Butane Gas Co.

Manufacturers of
Above-Ground and Under-
Ground Butane Storage
Systems and Butane Truck
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Serving the
Liquefied Petroleum Gas Dealers
Only

PHONE

WRITE

MEMPHIS, TENN.

The Whys of the Safety Code

THIS is the fourth installment of explanations of the objectives which prompted the writing of the safety code of the National Board of Fire Underwriters, as contained in Pamphlet No. 58. Others appeared in the May, July and September issues, and more will follow later. Those desiring more specific information may write to our Research Department.

Continuing with Division 1, we come to Section 9:

9—Installation of Storage Containers

(a) What are foundation requirements?

The code calls for satisfactory foundations but cannot provide design or details as each foundation condition is a separate problem.

For larger installations, most states require that foundation designs be furnished by licensed engineers.

For the average installation which the code attempts to cover the importance of proper foundation design is brought out.

Concrete or masonry saddles are required as these are fireproof and prevent the falling of a tank due to fire from an outside exposure.

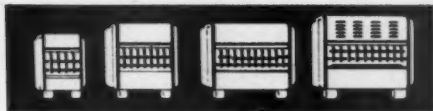
Provision for thermal expansion and holding down the tank is required. Any steel tank will expand and contract due to change in atmospheric temperature and even though

Hitting New High IN L.P.G. HEATING SALES



Rich porcelain enamel,
grained walnut pattern, chrome trim.

The season's leader built in 4 sizes. High efficiency burner and precision controls insure operating economy. Fine 2-way heatmakers . . . radiate to floor and circulate to living zone.



DEALERS: Write today for literature, prices and discounts.



THE OHIO FOUNDRY & MANUFACTURING CO.
STEUBENVILLE, OHIO

LITTLE GIANT Gas CIRCULATORS

An accurate measure has no substitute



THIS SYSTEM OF BUTANE METER DISPENSING
IS THE FIRST AND OLDEST KNOWN TO THE
LIQUID PETROLEUM GAS INDUSTRY
AND IS DESIGNED AND BUILT FOR
YEARS OF DEPENDABLE SERVICE



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*For Safety
and Economy*

ETHYL MERCAPTAN

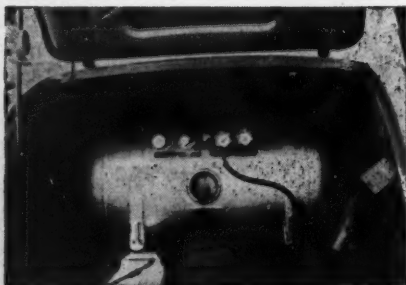
Purified

**The ACCEPTED
standard
odorant
for liquefied
petroleum
gases.**

**MALLINCKRODT
CHEMICAL WORKS**

ST. LOUIS

NEW YORK



SPECIAL CONTAINERS

All special LPG storage requirements are efficiently cared for by our experienced craftsmen. Illustration shows special butane tank installation in a late model passenger car.

American Butane and Pressure Tanks are made under strict CIAC-API-ASME-API Code requirements—skid, storage, mobile tanks—household bottles. Investigate American Quality Tanks before you buy.

AMERICAN PIPE & STEEL CORP.

Manufacturers and Distributors

Alhambra

California

the amount is not great, if provision is not made for one end to be free, high strains can be set up in the tank shell or in the foundations, causing them to tip. One end should be anchored to the foundation to minimize movement of piping and the throwing of strains on connections. The end having pipe connections that are connected to other equipment or run into the ground is the end that should be anchored.

If excessive loads are concentrated in the tank shell due to improper foundations or supports, added stress is introduced into the steel. The saddles should be wide enough to evenly distribute the load into the shell without over-stressing.

Moisture Will Cause Corrosion

When the tank rests on the concrete saddle, moisture can collect and cause corrosion to the shell which eventually will result in pit holes and leaks. Bearing pads should be welded to the shell at support points. These should be full-welded and not tack-welded, as moisture can get between the bearing pad and the shell if only tacks are used.

Structural steel supports may be used but they should be fireproofed with concrete or insulating material and should be set on substantial and safe concrete footings.

Containers under 5000-lb. water capacity with bottom of shell within 24-in. of the ground, may be supported on fireproofed metal supports. This section of the code is included to take care of the many thousands of small containers which can be adequately supported safely and neatly

with small steel saddles.

The exemption for fireproof supports for any container installed in an isolated location is included to take care of many installations where there are no structures or exposures any place near the installation and where the possibility of weakening the steel supports due to outside exposure is practically nil.

(b) Why is depth requirement made for underground containers?

(1) Underground containers must be buried under the frost line to prevent damage to the coating and to prevent condensation in the vapor lines from the tank.

The minimum of 2 feet or the substitution of a concrete slab is to prevent undue loading on the tank shell that might be caused by a truck or tractor or other heavy load passing over the top of the tank.

(2) The relative corrosiveness of soils is such a variable that it is impossible to state what a satisfactory coating shall be for any soil. To require a coating or method of construction that would take care of the worst conditions found would be uneconomical and unfair for milder exposures.

Corrosion may come from chemicals and moisture in the soil or from electrolysis. The result of this corrosion is pitting, with eventual leakage. Many thousands of dollars have been spent by the oil and gas industries in an attempt to determine the causes of corrosion and methods to prevent it.

It is impossible to set forth in rules just what is satisfactory to prevent corrosion and the severity can only be

The Hiawatha

2-OVEN COMBINATION RANGE

ANOTHER REASON SO MANY
DEALERS ARE TAKING ON
THE ROUND OAK LINE



HERE'S a revolutionary

new combination range for gas and coal or wood. Has two complete ovens. Actually two ranges in one! Opens rich rural and suburban markets for dealers in every section of the country.

HEATER RANGE

Another leader is the *Miami*... a complete gas range with coal and wood circulating heater section, designed especially for homes where kitchen heating facilities are necessary. Write for facts today!



The practical Miami circulating heater range.



ROUND OAK

of Dowagiac, Mich.

STOVES • RANGES • FURNACES • OIL
BURNERS • AIR CONDITIONERS • STOKERS

Round Oak Co., Dowagiac, Mich. Dept. BP-10
Send me the facts on Round Oak ranges today!

Name _____

Address _____

City _____

State _____

"HEAT LIKE SUNSHINE"

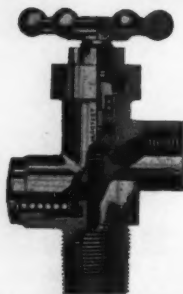
THE
VITARAY

Line Consisting of
**RADIANT, FIREPLACE
INSERTS, WALL INSERTS,
AND CIRCULATING HEATERS**
are specially designed for and
A. G. A. APPROVED
on Liquefied Petroleum Gases

Write for Complete
Literature and Prices.

THE QUAD STOVE MFG. CO.
COLUMBUS, OHIO

**KEROTEST
CYLINDER VALVES**



The valve illustrated herein has been proved in service by many of the leading manufacturers and distributors of liquefied petroleum and includes the famous KEROTEST diaphragm packless internal with automatic spring relief type safety device.

KEROTEST

KEROTEST MANUFACTURING COMPANY
PITTSBURGH, PA.

determined by systematic inspection.

There are many commercial products available as corrosion preventatives and suitable material should be used.

In congested areas where leakage due to corrosion might become dangerous due to migration of the gases through the fissures in the soil, the tank should be set in a concrete vault and back-filled with a non-corrosive sand.

(c) What regulations are there on location and support of skid tanks?

(1) Skid tanks are normally used as temporary storage for contractors, well drillers, on farms, etc. The nature of the tank is a combination transport tank and usage tank and they often follow the work and normally are not located in congested locations. Temporary metal supports are satisfactory, but wooden platforms or foundations are not acceptable.

(2) Skid tanks if located over 5 feet above the ground must be supported in fireproof foundations as a matter of safety.

(3) The height of the skids is limited in the code to clarify the definition of a skid tank.

(4) Connections and fittings must be protected on skid tanks as they can be used as transport tanks.

(5) Head outlets are recommended but properly guarded connections in the shell are allowed and in some cases are necessary for efficient operation.

(6) When skid tanks are connected to piping, flexible connections are required to prevent breakage due to settling or movement. A block valve

should be incorporated in the connecting line close to the tank connection so shut-off can be made if tanks are disconnected and moved.

(7) Skids and lugs are attached to the tanks by the tank manufacturer, and no tank should be converted to a skid tank by other than certified welders.



Recent Tank Deliveries Show LPG Spread in Northwest

King Bros., Inc., Portland, Ore., recently delivered several new type design underground butane-propane storage tanks in central Oregon and Washington where temperatures run as low as 20° below zero. No heat exchangers or vaporizers are necessary with these units, which use a mixture of as high as 55% propane and 45% normal butane, thus allowing the use of a low temperature dew point fuel.

This company has also just completed bulk plants for Springfield and Eugene, Ore., for Butane Service Co. Both jobs are 125-lb. A.S.M.E.-N.B.F.U. tanks. A three-tank service truck for handling 1000 gals. of propane for Butane Sales Corp., Seattle, Wash., was delivered in late August.

Just now there are under construction two 12,000 net butane gallon 125-lb. A.S.M.E.-N.B.F.U. tanks for delivery into northwest Washington.

The butane division of King Bros., is under the direction of William Fogle, superintendent and production manager for the firm.

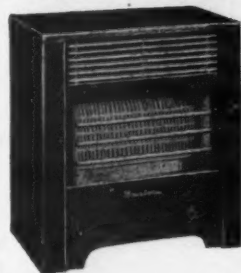


Chris M. Sorensen Now Makes Butane Conversions

Sorensen's Machine Works, at Mendota, Calif., is now prepared to make automotive conversions for use with butane for fuel and to service trucks, according to Chris M. Sorensen, proprietor.

The company also handles domestic and commercial installations.

DEARBORN GAS HEATERS



A. G. A.
APPROVED
WITH SAME
B. T. U.
RATING
FOR
NATURAL
AND

BUTANE GAS

Dealers who carry the Dearborn Super-Quality Line already know of Dearborn's outstanding performance with Liquefied Petroleum Gases as well as with Natural, Mixed, and Manufactured Gas. Users everywhere praise Dearborn's thrilling performance and matchless economy.

... This Message, Therefore

is for the attention of Dealers who are considering the handling of a superior line of gas heaters... who want a First Quality Line... one that possesses distinctive selling and friend-making features... a line that gives trouble-free performance and stays sold.

... Or For You, Mr. Dealer

who are not satisfied with your present line from the standpoint of customer satisfaction, sales, and profits; and who wishes to switch to the World's Finest and Best... a line that really will burn Liquefied Petroleum Gases most satisfactorily.

Twelve Smart Models

No matter which kind of gas your customers use; no matter what size, kind, or capacity is required, you'll find it in the Dearborn Line. Smartly-styled cabinet models, vented or unvented, with B.T.U. Input Ratings of 20,000, 25,000, 28,000, 35,000 and 50,000. Featuring extra-safe COOL exteriors with beautiful furniture-like finishes. Also, three dignified, thrifty Clayback models in popular sizes.

Write today for Free descriptive folder, prices, and attractive offer to Dealers.
Address Dept. 101.

DEARBORN STOVE COMPANY

3256 Milwaukee Ave., CHICAGO
3601 So. Grand Ave., LOS ANGELES

PRODUCTS

Butane-Propane Pump

Smith Precision Products Co., 1135 Mission St., South Pasadena, Calif.

Model: No. 200 and No. 300.

Description: Smith butane-propane pumps are manufactured in two sizes, Models 200 and 300. Their displacement capacity is 60 and 100 gals. per min., respectively and can be applied for either direct electric motor drive or for truck mounting with direct power take-off drive. Designed to withstand operating pressures of 250 lbs. per sq. in. Provides adequate capacity for new installations if propane is substituted for butane. These pumps have been adopted by the Tokheim Oil Tank & Pump Co., Fort Wayne, Ind., as standard equipment on their dispensing units.



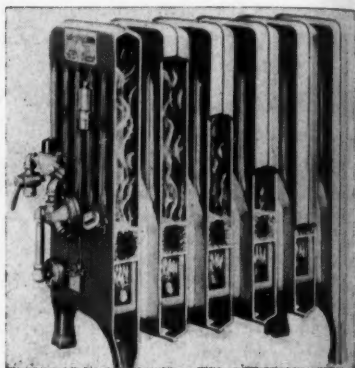
Gas Radiator

James B. Clow & Sons, 201 N. Talman Ave., Chicago.

Model:

Description: Clow Gasteam radiators are constructed of cast iron. The sections are fitted together with slip nipples and held firmly in place by tie rods. The upper part of the sections form the radiating surface. Directly beneath the

radiating surface is the water chamber which holds a body of water one inch deep. The combustion chamber located below the water chamber is an integral part of the radiator sections and encloses a gas burner. The sections at the combustion chamber are lap jointed, entirely enclosing the gas flame. A steam



pressure regulator so operates that when first lighted a maximum volume of gas is burned to quickly generate steam. When 5 to 8 lbs. pressure is reached the regulator automatically cuts down the supply of gas to maintain just that pressure. The water chamber need be replenished with water only a few times each season. Each radiator is operated independently.

B.t.u. Indicator

Connelly Iron Sponge and Governor Co., 3154 S. California Ave., Chicago, Ill.

Description: A calorimeter, known as the Caloroptic is an automatic watchman that keeps the product of gas plants up to the required heat value standard and which hollers for help if anything goes wrong. The instrument can be installed in permanent position and is valuable in mixed gas plants or propane-butane-air gas systems, as well as in regular manufactured-gas plants. When setting the Caloroptic to provide a constant indication of the increase or de-

crease in B.t.u. content of the gas, the air port is adjusted so as to provide some yellow in the flame to actuate the cell, which in turn is connected to and operates an extremely sensitive electric relay, which operates red and white lights to indicate at a distance the condition of the gas. The relays can also be connected to a horn or a bell to call attention to B.t.u. changes.

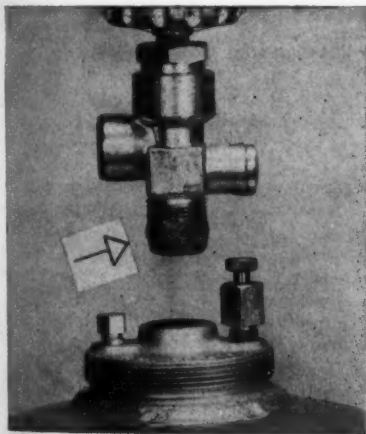


Valve Sealing Compound

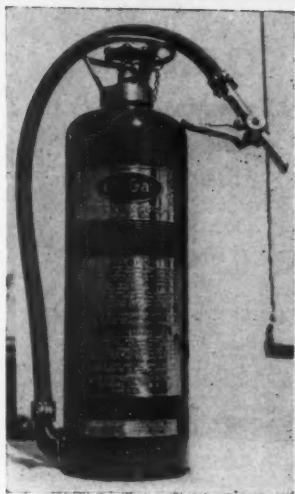
Electric and Carburetor Engineering Co.,
2323 E. 8th St., Los Angeles, Calif.

Model: Bu-Seal.

Description: Bu-Seal has been developed for the sealing of tank and cylinder valves used in the LPG industry, as shown on valve threads in illustration. Features: economical to use; no waste; withstands pressure up to 1200 lbs.; takes permanent set only after 48 hours; valves once set may be removed without



damage; is not soluble in water, oil or gas; has litharge and glycerine base; will not harden in container; cover of container may be left off for 24 hours without damage; original consistency can be maintained by adding glycerine.



Fire Extinguisher

Dugas Engineering Corp., 332 South
La Salle St., Chicago, Ill.

Model: 30T.

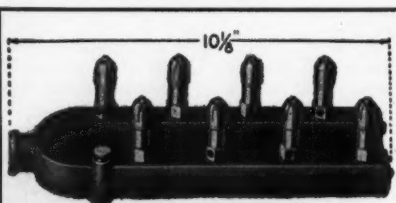
Description: This Dugas extinguisher contains 30 lbs. of Dugas dry chemical compound which is propelled into the fire area by pressure furnished from a small cylinder of carbon dioxide (CO_2) contained within the extinguisher. The compound on being heated by the fire changes chemically from a dry powder to inert gases which immediately smother and extinguish the fire. All residue remains a perfectly dry powder which is harmless to persons, fabrics or machinery and can be blown or brushed away. These units never require a recharge unless used and will last indefinitely. Especially adapted to pressure gas fires such as encountered in the liquefied petroleum gas industry, because these extinguishers have sufficient force to place extinguishing compound in pressure fire area. Hand extinguishers are manufactured in two smaller sizes, also larger, two-wheeled engines for plant and industrial protection. All have approval of Underwriters' Laboratories and Factory Mutual Laboratories.

The
**CARTER
OIL COMPANY**

Tulsa, Oklahoma
**Manufacturers
and
Suppliers**

of dehydrated
PROPANE and BUTANE
for the distributing and industrial
trade. Shipping points: Seminole,
Oklahoma; Stonewall, Oklahoma,
and St. Elmo, Illinois.

Address inquiries to:
Marketing Department
Room 928, National Bank
of Tulsa Building
Tulsa, Oklahoma



No. C. L-80 Burner

**BARBER APPLIANCE
BURNERS**

For every appliance, there is a Barber Burner unit with proper jets, and correctly designed, to suit the combustion requirements of Butane or Propane Gas, and to fit the appliance itself. Eliminate servicing and back firing. Every distributor of these fuels, as well as appliance builders, can best serve their customers by recommending the use of genuine Barber Burners. Submit your burner problems to us. Write for Catalog showing complete Barber line.

The Barber Gas Burner Co.

3704 Superior Ave.

Cleveland, Ohio

**New Missouri LPG Firm
Locates In Fertile Field**

With the completion of a modern bulk butane storage plant and adequate propane bottling facilities about the middle of August, the Joplin Butane Gas Co., Inc., has made Joplin, Mo., a center for the distribution of liquefied petroleum gas. The territory now served extends in all directions for a distance of 35 miles from the central office.

To facilitate deliveries and installations, jobbers have been appointed in Seneca and Neosho, Mo., and in Miami, Okla., who will handle nearby customers.

Within four weeks after becoming established, the one installation crew had to be increased to two and even this double force is running half-a-dozen installations behind all the time, an attest to the popularity of the fuel in that district.

The Joplin Butane Gas Co. was established by G. L. Childress, who is president of the company. Gayle Childress heads the installation and service department and Monte Taylor is in charge of sales. Bottles for aboveground hook-ups are owned by the company and butane deliveries are made in newly acquired delivery tank equipment.



**Butane Power Demands
Reflected in Orders**

Following a week at the home office of the American Liquid Gas Corp., in Los Angeles, Fred H. LaFrentz and J. D. Arden, have returned to the Middle-West to carry on their work as representatives for the company.

The addition of a number of new dealers throughout the Middle-West, as well as California, and the rapid spread of butane automotive installations has brought the American Liquid Gas Corp. the largest butane carburetor and conversion equipment business in history, according to Wm. L. Conzelman, general manager of the organization.

Much of this business came through authorized representatives that have been with the corporation less than 90 days, it is reported by Mr. Conzelman.

Arkansas Dealers Form State Association

Butane dealers of the State of Arkansas met at the State Capitol of Arkansas, Little Rock, Sept. 6 for the purpose of forming the Arkansas Liquefied Petroleum Gas Dealers Association. Hunter P. Riley, Riley Butane Gas Co., Pine Bluff, Ark., was named president of the new organization with Richard Weis, Weis Butane Gas Co., Wheatley, Ark., as vice president.

A committee of three was appointed to draw up the by-laws and constitution which will be acted upon at the next meeting.

The new organization is modeled after the Louisiana Butane Dealers Association, Inc., J. R. Holicer, president of the Louisiana group, met with the Arkansas gathering at the time of the formation of the organization.

Jackson Brothers Divide Service Station Interests

Jackson Brothers, who in the past have operated a butane service station in Stockton, Calif., and a supply plant in Turlock, Calif., have divided their operations.

L. R. Jackson will hereafter conduct the Stockton office under the name of the Butane Gas & Equipment Co. in association with E. H. Grogan, who formerly operated the Liquefied Gas Engineering Co. there. R. L. Jackson will direct the Turlock office, which is largely concerned with domestic installations.

Neil Sweney Takes Prizes In Skelgas Stove Sales

Neil Sweney was top man among northern Indiana dealers in the sale of Skelgas ranges during the competition that ran through May, June and July. He made his quota during the first two months, and then during July sold three and a half times the stipulated quota.

He won prizes of a new suit of clothes and hat and \$40 in cash.

1000 GALLONS in 20 MINUTES / ACTUAL PERFORMANCE !



That is the performance record of the Smith 2" Model 200 Butane-Propene Pump for unloading the 1,000 gallon tank truck shown above. This pump is used successfully to fill bottles; also loads and unloads the tank trailer by using a two-way manifold.

Performance such as this is every day work for Smith Pumps. Why not investigate their performance records before you buy? Supplied to give full capacity either at 440 R.P.M. for truck power take-off or at 1800 R.P.M. for electric motor direct drive. They are particularly designed for LPG pumping service, including bulk and dispensing plants, bottle filling, tank trucks, refineries, pipe lines, etc. Detailed information on request.

SMITH PRECISION PRODUCTS CO.
1135 Mission St., South Pasadena, Calif.

SMITH BUTANE-PROPANE PUMPS



DEFENDER

UNBREAKABLE

15" U. GAUGE

For

Butane Gas Service Men

Supplied in 1½" Steel
Protecting & Mailing Tube.

The world's best and the
world's cheapest test Gauge
supplied in any length with
scale reading in Inches or
Ounces.

Ask for Bulletin No. 40.

Defender Automatic Regulator Co.

308 S. 8th St., St. Louis, Mo.



STABILIZED

BUTANE

We make wholesale deliveries by
Transport, Tank Car or from one of
our Bulk Plants.

Exclusive Distributors

SMITH STEEL TANK CO.

Manufacturers of A.S.M.E. code tanks

For further details write or wire

R. J. ALLISON CO.

P. O. Box 23

TULSA, OKLA.

Worthington Gas, Inc., Sold to Philgas

The goodwill, some 2500 customers, a dealer organization that extends through parts of three states and all physical assets of Worthington Gas, Inc., Worthington, Minn., was sold to the Philgas Division, Phillips Petroleum Co., on Sept. 10, according to an announcement by E. O. Olson, president of the Worthington firm. Among other properties figuring in the deal is the bottling plant and equipment that has been supplying dealers' needs in the past.

Under the direction of H. N. Hoaglund, in two years' time, Worthington Gas, Inc., spread its distribution of liquefied petroleum gas into southwestern Minnesota, northwestern Iowa and eastern South Dakota. Several hundred dealers comprised the group served by the franchise operators. Mr. Hoaglund has accepted a somewhat similar position with the Home Gas Co., of Minneapolis, with headquarters in Mankato, Minn.

No major changes in policy are contemplated, it has been stated by K. W. Rugh, retail sales manager of Philgas.

Other employees of Worthington Gas, including Fred Reikow and Ernie Halgrimson are being retained, and J. W. Edstrom and Waldo Hoaglund have been engaged to handle the truck deliveries of Philgas bottles to the large dealer organization.

Owen G. Hyde, formerly with Philgas in Ohio, and George Dixon, formerly with the company in Iowa, will take over the field supervisory work. The bottling plant in Worthington will be under the supervision of Clarence Hedger, formerly with Philgas at Pontiac, Mich.



Placer Gas Co. Buys New Service Truck

William Schaller, of the Placer Gas Co., Auburn, Calif., recently returned from a trip to Los Angeles driving a large butane service truck.

The tank truck will be used in serving domestic customers in the mining districts adjacent to Auburn and along the Mother Lode highway of early California fame.



Trademark

METALBESTOS is supplied in 3 ft. and 10 ft. lengths . . . Complete line of fittings . . . round & oval shaped.

Your Safeguard in Venting Butane and Propane Installations

Here—at last, is a vent pipe with proved safety and efficiency. It has the approval of the Underwriters' Laboratories.

METALBESTOS is scientifically constructed to insure safety and perfect combustion. It will improve the performance of gas appliances and effect economy. Insure customer satisfaction by using vent pipe that will meet all requirements.



Williams-Wallace Co.

160 Hooper St., San Francisco, Calif.

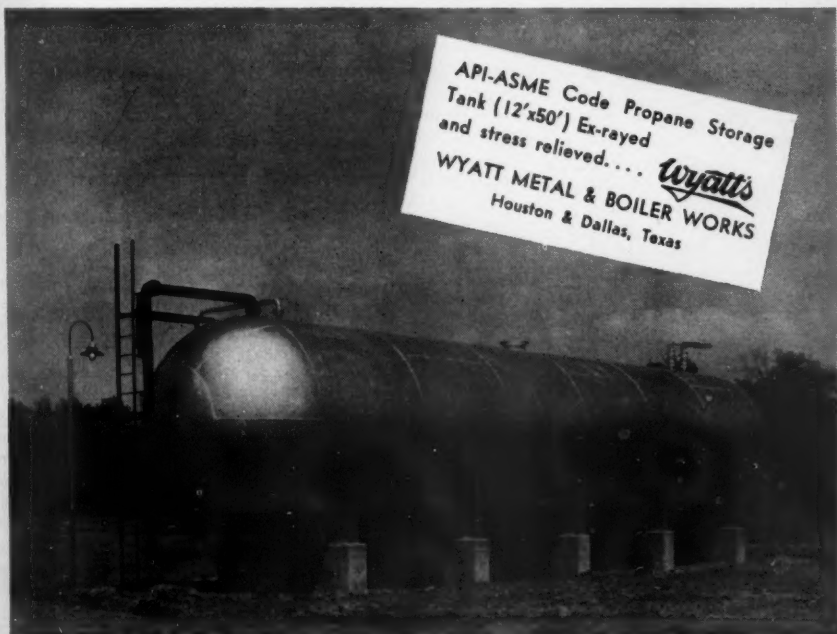
METALBESTOS

NON-CORROSIVE

SAFE

EFFICIENT

Gas Vent & Flue Pipe



API-ASME Code Propane Storage
Tank (12'x50') Ex-rayed
and stress relieved. . . .

Wyatt's
WYATT METAL & BOILER WORKS
Houston & Dallas, Texas

RESEARCH

- **BUTANE-PROPANE** News wishes to keep its readers informed regarding technical and practical advances concerning research, manufacture, development, and transportation in the liquefied petroleum gas field. In this column will be found a resume of recently published articles, papers, bulletins and books dealing with the industry's various phases.

Master Highway Guide—Road Atlas of the United States; 154 pages; paper; spiral binding; published by Rand McNally & Co., 111 Eighth Ave., New York; \$1.50. Presents maps showing all main and many secondary highways in the United States, Canada, and Mexico; maps of larger cities; a guide to places of historic or scenic interest in every state; mileage maps; index of cities, counties, and towns; and a list of places for food and accommodations. Data are given by states in such manner as to permit the highway traveler to map his itinerary, plan running time, and decide where to stop. Highways are shown by type of construction, and parks, points of interest, and historical sites are indicated.

Handbook of Mathematical Tables and Formulas—By Richard Stevens Burington, Ph. D. Second Edition. Handbook Publishers, Inc., Sandusky, Ohio, \$1.25. Of value to engineers and others in the liquefied petroleum gas industry when quickly available theorems, formulas and tables are needed.

First part of book contains a careful summary of the more important formulas and theorems of algebra, trigonometry, analytic geometry, calculus and vector analysis. A comprehensive table of deriva-

tives and integrals is included. Second part contains logarithmic and trigonometric tables to five places; tables of natural logarithms, exponential and hyperbolic functions, probability functions, squares, cubes, square roots, cube roots, reciprocals, and other numerical quantities. A Greatly Enlarged Table of Integrals, and an improved table of square roots and cube roots have been incorporated in this edition.

Salary Determination—By John W. Riegel, A. P. I. *Quarterly*. 278 pages; cloth or paper; published by University of Michigan Press, Ann Arbor, Mich.; \$3.50 cloth; \$3 paper. Study, sponsored by the University of Michigan Bureau of Industrial Relations and financed by the Earhart Foundation, of common policies and selected practices in 40 American corporations as regards salaries. Designed to throw light on how judicious salary administration can promote proficiency, co-operation, ambition, and satisfaction of approximately 10,000,000 salaried employees in the United States. Scholarly approach to an involved and important subject, with conclusions drawn from policies now effectively in force.

Butane-Propane Mixture Used in Temperature Reduction—Refiner, May, 1940, pp. 84, 85. Since butane has been adopted as fuel for drilling in North Texas, methods have been applied to gasoline plants to increase its yield. Deep Oil Development Co. is using a mixture of butane and propane to reduce the temperature of intermediate pressure gas. As in other plants employing compression and cooling to reduce desirable fractions in the gas to liquid, this company constructed its K-M-A plant with shell-and-tube units through which the gas was passed with water circulated through the tubes to obtain the required temperature. During the 1939 summer, however, atmospheric temperatures were too high to obtain low temperatures with ordinary water circulation, and steps were taken to employ expansion of liquefied gases to reduce the temperatures further. These steps are described and illustrated.

Some Fundamental Considerations in the Design and Application of Displacement Meters—E. W. Jacobson. *Oil and Gas Journal*, June 20, 1940, pp. 36, etc. In the manufacture and application of displacement meters for measuring liquid hydrocarbons, extravagant claims of precise measurement have often been made. These have led to considerable trouble from failure of the meters to perform as claimed and from failure not only to check measurement by gage tanks but also to check one meter against another. The limit of error most often quoted is 0.1 per cent. Author examines this limit of error as to its actual magnitude and the difficulty of obtaining measurement within this limit. As a result of this examination he concludes that first, the claimed standard of measurement has been closer than commercially practical; second, a close study of the characteristics of the two types of displacement meters, namely pack and film sealed, indicates particular fields of application for each type, depending upon accuracy of measurement required, permissible pressure drop, nature of register load, and range of viscosity of fluids to be metered; third, the economics governing the installation of displacement meters must consider the cost, not only of the meter, but also the additional cost of adequate liquid-conditioning equipment, calibrating devices, and regularly scheduled maintenance if satisfactory meter performance is gained.

Motor Truck Facts—1940 edition; 48 pages; paper; halftones, charts, and tables; A. P. I. *Quarterly*; published by Automobile Manufacturers Association, New Center Building, Detroit, Mich. Fourth edition of a convenient annual of useful statistics and helpful economic data on motor trucks. Sections cover sales, registration, taxes, utilization, employment, highways, regulation, and safety.

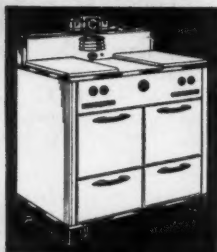
P-V-T Relations for Propane — W. W. Doschner. *Industrial and Engineering Chemistry*, June, 1940, pp. 836-840. Design and operation of equipment in the petroleum and natural gas indus-

tries demand accurate and complete information of the physical and thermal properties of the petroleum hydrocarbons. The work reported was undertaken as part of a program to increase this information. The temperature range covered in this work was 30° to 336.16°C. Decomposition of propane was noticeable at the latter temperature. The pressure range was 1 to 120 atmospheres.

Butane Chilling of Absorption Oil Increases Plant Yield—*Refiner*, May, 1940, pp. 82, 83. By reducing the temperature of absorption oil 20°F. in its Fairfax plant, Skelly Oil Co. has gained an increase of 2000 gals. of natural gasoline daily. This increase does not include improved yield of butane and lighter fractions. This temperature reduction is accomplished by expanding a normal butane cut in a closed system of shell-and-tube exchanger, through which the butane is continuously circulated. The unit requires limited equipment and occupies small space.

Conversion of Petroleum—Production of Motor Fuels by Thermal and Catalytic Processes, by A. N. Sachanen; *A.P.I. Quarterly*. 398 pages; tables and charts; published by Reinhold Publishing Corp., 330 West 42nd St., New York; \$6. Helpful modern treatise on fundamental principles and practices of converting petroleum products into gasoline and other fuels, with comprehensive data on thermal and catalytic reactions, cracking, hydrogenation, refining equipment, treating methods, and products. Because of the broad scope of the subject, the author has been forced to omit historical data and consideration of patents. However, he indicates exhaustive source material, and has written a book long wanted by the refinery technologist as well as by the average oil man confused by rapid progress in the science of petroleum refining. Simplified flow charts of various new refining processes, brief discussion of their economic phases, author and subject indexes, and copious bibliographical references make the volume additionally helpful.

CROWN GAS RANGES for LIQUEFIED GAS



**LARGEST
AND MOST
COMPLETE
LINE OF
BUFFET &
DIVIDED-
TOP
RANGES**

FALL FACTORY SPECIAL

Emerald Model No. 135-04. Large 38 1/2" Divided-Top Gas Range. (Also available in Conventional 4-burner top)—A regular number in the 1940 Crown line . . . SPECIALLY PRICED because of volume production. Use it as a leader to increase your fall sales and profits.

Write for special prices.
53 years of Range Leadership.

CROWN STOVE WORKS

4631 W. 12th PLACE, CHICAGO

Originators of BUFFET and DIVIDED-TOP GAS RANGES

Your LPG Requirements

**SHIPPED RAPIDLY FROM OUR
DALLAS AND ATLANTA STOCKS**

* * *

GAS EQUIPMENT CO., INC.

2620 S. Ervay St., Dallas, Texas.

GAS EQUIPMENT SUPPLY CO.

1157 W. Peachtree St., Atlanta, Ga.

* * *

Distributors for

BASTIAN-BLESSING CO.

L. C. RONEY, INC.

HACKNEY I. C. C. CYLINDERS

* * *

Liquefied Petroleum Gas Equipment

General Controls Has New Locations for Two Plants

General Controls Co., Glendale, Calif., manufacturers of pressure, temperature, and flow controls has recently moved into a new and permanent factory on an 11-acre site at 801 Allen Ave., in Glendale.

The new plant will house the general offices, research and testing laboratories and complete and new manufacturing facilities. The Los Angeles screw machine division of the company will also be incorporated in the new plant.

General Controls also announces a change in address of their Kansas City office to 421 Southwest Blvd., with E. V. Bialik in charge as sales manager.

Larger quarters at this new address will permit the company to carry larger stocks and increase the scope of service to customers in that territory.



Louisiana Amends Act Governing Use of LPG

During the 1940 session of the Louisiana legislature, provision was made for the amending and re-enacting of Act No. 378 of 1938, which governs the sale, installation, transportation and use of liquefied petroleum gas. The new act is known as No. 295.

Amendments were made to Sections 4, 7, 8, (a and c), 10 and 11.

As formerly the administration of the act is placed in the hands of the Louisiana Public Service Commission, the gas division of which is under the direction of W. P. Thomas. (Additional reference, p. 37.)



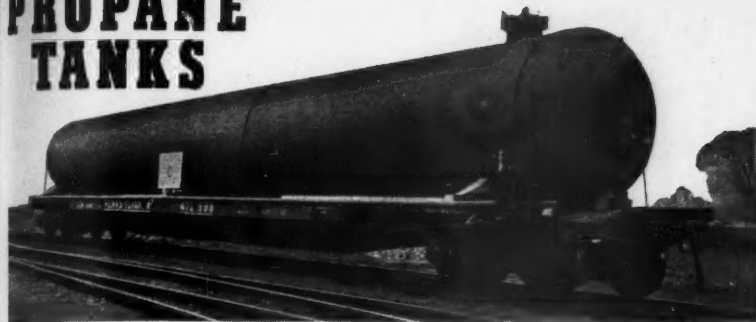
West Texas Butane Gas Co. Moves

The West Texas Butane Gas Co., formerly located at 131 W. Twohig street, San Angelo, Texas, has moved into a newly remodeled building at 28 W. Twohig street.

A need for larger quarters prompted the change. A showroom is included.

BUTANE-PROPANE News

PROPANE TANKS



The proper design and fabrication of Tanks for Propane Storage is dependent upon the knowledge and experience of the fabricators. MUCH DEPENDS UPON THEIR SPECIFICATIONS FOR MATERIALS AND THEIR CHOICE OF PROCEDURE FOR HANDLING THEM. Because DOWNTOWN has had considerable experience in building tanks for this service, we do know the answers to those basic problems. Let us help you with yours.

—for Underground and
Above-Ground Service



A 1000% INCREASE IN TAPPAN L. P. G. RANGE SALES IN 5 YEARS! Why?—Ask any Dealer—



IT'S no secret why TAPPAN's L. P. G. Range sales have increased by leaps and bounds. Ask any TAPPAN Dealer. He'll probably dwell on the exhaustive research which has opened new markets by increasing the efficiency of TAPPAN L. P. G. Ranges—he'll surely tell you about the Divided-Top, Visualite Oven and the Mighty-Mite Top Burner—originated by TAPPAN—and he'll put in a word about TAPPAN's many sales helps like the big L. P. G. broadside, etc. Then—he'll probably advise you to take on the progressive TAPPAN line—to write for information to—TAPPAN STOVE COMPANY, MANSFIELD, OHIO.

® Registered Trade Mark

TAPPAN

Gas Ranges

INCREASE YOUR L. P. G. SALES

SPRAGUE METERS

for

PROPANE-BUTANE SERVICE

Write for Particulars

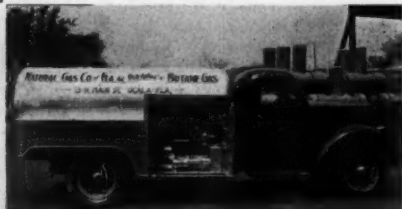
SPRAGUE METER COMPANY

Bridgeport, Conn.
Los Angeles, Calif.
San Francisco, Calif.

TRUCK TANKS

and

BULK STORAGE TANKS



A.S.M.E. Code Construction

Write for prices—specifications—
further information

Manufacturers of the GEST-CO line of
Truck Tanks

GENERAL STEEL TANK CO.

Steel Plate Fabrication
BIRMINGHAM, ALA.

Natural Gasoline Production Increased in July

The production of natural gasoline increased materially in July, 1940, according to data reported by the Bureau of Mines. The daily average in July was 6,346,000 gals. compared with 6,161,000 gals. in June. The outstanding increases occurred in Texas, particularly the Panhandle, East Texas and Gulf districts.

Stocks continued to increase, totaling 318,528,000 gals. This was 24,528,000 gals. more than on hand the first of the month and the highest since September, 1938.

Shipments to jobbers increased from 14,490,000 gals. in June to 16,968,000 gals. in July, while exports reported decreased from 8,778,000 gals. to 5,250,000 gals.

The average vapor pressure for shipments to refineries decreased, while those for all other movements increased. The weighted average for the month was 17.7 lbs. compared with 18.1 lbs. in June and 19.4 lbs. in July, 1939.



Butane Firm Installs Branch Office in Kennett, Mo.

A branch office of the National Butane Gas Co., of Sikeston, Mo., has been established in Kennett, Mo., and will serve customers in Missouri south of the town of Portageville.

The new enterprise is under the direction of Hubert Boyer, who is well known locally through the installation of 75 LPG systems in the past. Assisting Mr. Boyer is James Bemis, formerly of St. Louis.



General Gas Light Has New Texas Representative

Announcement has come from the General Gas Light Co., of Kalamazoo, Mich., of the appointment of W. W. Hall to handle the Texas territory in the sale of Humphrey gas appliances. Offices are located in the Santa Fe building in Dallas.

Mr. Hall formerly was associated with the Ruud Manufacturing Co.

Farmer's Butane Gas Awards Prize to Mrs. Della Adams

Farmer's Butane Gas Co., of Houston, Texas, of which Tom Ruland is the owner, recently offered a \$15 hat to the sales person of his organization turning in the most sales for a given month. The special award was won by Mrs. Della Adams.

R. R. Prince of the same organization, has recently sold his 500th Electrolux, according to Mr. Ruland.

Farmer's Butane is able through the lines which it handles, to offer a complete service to builders of new homes. The services include plumbing, drilling the water well, piping the home for both water and gas, providing the butane system and the various appliances required. The company handles the Economy butane plant manufactured by Dallas Tank and Welding Co. Sam Daigle is sales manager of Farmer's Butane.

Borelli Brothers Widen LPG Distribution

Francis and George Borelli have installed a propane bottling plan in Okarche, Okla., to facilitate an increasingly wide distribution of propane to customers throughout Oklahoma. Until two years ago, butane was handled exclusively but low winter temperatures have caused the firm to use propane for aboveground installations and to limit butane sales to those having underground tanks.

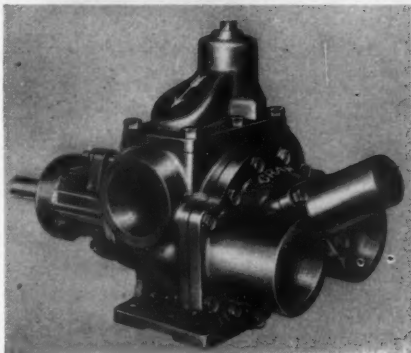
Borelli Brothers have been identified with the LPG industry in Oklahoma for the past five years and operate the Borelli hardware store in Okarche. They also recently purchased a new, specially designed transport truck to augment their delivery system.

Vacherie Fuel Corp. Will Sell Butane in Louisiana

Vacherie Fuel Corp., Vacherie, La., has just been formed to provide domestic butane service to customers within a radius of approximately 75 miles around Vacherie.

L. M. Waguespack is president of the company and will manage it.

*"It's a Natural
FOR PUMPING
BUTANE"*



The action of a Granco Butane Pump is just like that of a lemon squeezer, moving the liquid evenly and smoothly with minimum turbulence and without pulsation. No other pump is like it—positive and quiet with long life. No wonder enthusiastic users say, "IT'S A NATURAL FOR BUTANE." Write for folder and complete information.

The EXCLUSIVE GRANCO PRINCIPLE

Rotary knuckle joint pivoted in housing—no blades, cams, gears, springs, scoops, valves, rings nor washers. No metallic contact between rotor and housing.

Granco PUMPS

Manufactured by
GRANBERG EQUIPMENT, INC.

1308 - 67th STREET
OAKLAND, CALIFORNIA

AGENTS IN PRINCIPAL CITIES.

Specializing in Butane Gas and Equipment

Hydro Gas Systems

Conventional Type Butane Gas Systems

Truck Tanks—Plain, Semi-Streamlined and Full Streamlined

Scaife I. C. C. Cylinders

Butane-Propane Hose

Liquid Meters

Ever-Tite Couplings

Serving Arkansas, Louisiana, Missouri and Southeast

SOUTHERN GAS & EQUIPMENT CO.

Gazette Building
Little Rock, Ark.

Martin Building
Birmingham, Ala.

**PROFIT
MORE!
GIVE
MORE!**

WITH

Anderson

SEALED HEAT GAS RANGES

Sell "SEALED HEAT" . . . Anderson's amazing cooking principle that seals in healthful vitamins . . . seals in natural juices and flavors . . . saves FOUR ways . . . and you sell MORE than just "another" gas range at MORE than ordinary profit. Housewives WANT this dramatically different range because of its unusual "FOUR WAY" savings. All models are approved by the A.G.A. for LP gases.

WRITE! Let us show you how to
PROFIT MORE by GIVING MORE!

ANDERSON STOVE COMPANY, INC.
ANDERSON, INDIANA



Fire Prevention Week This Year Is Oct. 6-10

The week of Oct. 6-10 has been designated national fire prevention week.

In referring to the occasion this year, L. W. Hutchins, Director of the Safety Research Institute, of New York City, says, "While prevention is the prime objective of everyone in the field of fire safety, millions of fires continue to break out every year. Hence everyone should be prepared to cope with them when they do happen."

The National Fire Protective Association is urging the cooperation of all business men, including the liquefied petroleum gas industry, in the observance of fire prevention week.



Pipestone, Minn., Will Have New Philgas Distributor

Arrangements were completed early in September for the Marshall-Wells store to take over the distribution of bottled Philgas in Pipestone, Minn.

The Worthington Creamery Co. originally held the franchise for this territory for the Phillips gas products, and for more than a year operated their own store here. Recently they sold their distributing facilities to the Phillips company, and representatives of that concern made arrangements with the Marshall-Wells store to distribute their products.



University Extension Courses For Oil and Geology Men

Of interest to oil engineers and geology students are two new courses which the University of California Extension Division opened on Sept. 17 and Sept. 26 at its downtown Los Angeles classroom center. The first course is titled "Petroleum Technology" and will feature a study of the history, origin, geology and chemistry of petroleum. Paul F. Devine is the instructor.

The second course, opened Sept. 26 and is titled "Oil Production Engineering" and has Glenn H. Bowlus as instructor.

Weights and Measures Conference Oct. 9-11

The Fifth Annual Conference of Weights and Measures Officials and School of Instructions will convene in Santa Barbara, Calif., Oct. 9-11, inclusive. C. A. Page, Santa Barbara county sealer and vice president of the State association, has charge of arrangements.

The opening meeting on Oct. 9 will be held in the supervisors' chamber on the second floor of the courthouse. On Oct. 10-11 the sessions will be in the convention room of Hotel Carrillo, official headquarters, with a display of weighing and measuring equipment in an adjoining exhibit room.



J. H. Tuttle Elected Vice President of Standard Oil

The board of directors of the Standard Oil Co. of California elected J. H. Tuttle to the vice presidency on Aug. 13, to succeed H. D. Collier who became president following the death of the former president, W. H. Berg, on June 26.

Mr. Tuttle entered the employ of the company in San Francisco in 1903. He advanced through the offices of auditor, secretary and comptroller to a position on the board in 1930.

J. H. MacGaregill, general manager of marketing, was recently elected to the board to fill the vacancy caused by Mr. Berg's death.

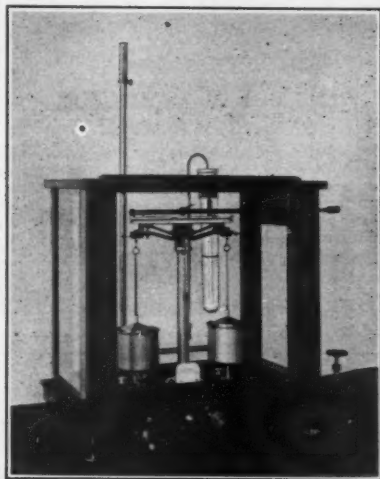


Continental Oil Co. Will Sell LPG To Distributors Only

The Continental Oil Co., Ponca City, Okla., announced Sept. 9, that it will sell liquefied petroleum gas to distributors from its Wichita Falls, Texas, refinery.

J. W. Flynn, assistant manager of the sales department, has stated that his company will sell on a wholesale basis only to those distributors who send to the refinery for the product with their trucks or their tank cars. The arrangement has been made particularly to accommodate distributors of northern Texas.

SEE WHAT THIS NEW LABORATORY BALANCE *Can do for You!*



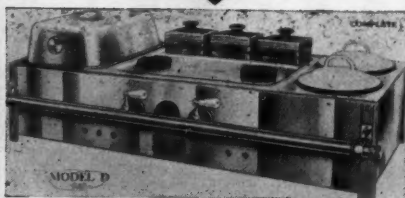
Reads Specific Gravity of Gases Direct to Third Decimal Place

Tests gases that are lighter or heavier than air. Operation is similar to ordinary analytical balance, except that perfect damping permits bringing needle point to rest exactly at zero, instead of noting its oscillations across scale. Normal range calibrated between .50 and 1.50—other ranges can be furnished. Requires only a very small sample. Send for Bulletin No. 111.

AMERICAN RECORDING CHART CO.

3113 E. 11th St., Los Angeles, Calif.

SEND FOR
INFORMATION
NOW!



MEXIHOT BARBECUE SANDWICH MACHINES

Thousands of installations in drug stores, tap rooms, roadside stands, cafes and other places that serve lunches have brought big repeat business. Low price means quick sale. Above model \$38.50, other sizes in proportion. Write for distributorship at once.

Department B 4
DICKERSON MANUFACTURING CO.
Springfield, Missouri

Announcing Distributorship **RANSOME** Stoves and Water Heaters in Southern California



Complete stock
of Pressed Steel
I. C. C. Cylinders in Los
Angeles for
immediate de-
livery.

BUTANE MILEAGE METERS ARE NOW AVAILABLE

Butane Tank Fittings, Butane, Natural Gas
Instruments, Domestic Regulators, Pigtaills,
Tanks, Gauges, Forged Brass Fittings, Dry-
gas Butane Filters.

ELECTRIC AND CARBURETOR ENGINEERING CO.

"Pioneers of the Butane Industry"

2323 E. 6TH ST.

LOS ANGELES

Why do People Use Hot Water?

By DALE REMINGTON

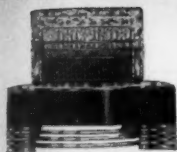
Advertising Manager,
Wisconsin Public Service Corporation,
Green Bay, Wisconsin

WHY do people use hot water? What are the appeals that will strike home to the greatest number? As advertisers and sales managers study selling helps in water heater promotions, they either answer these questions factually or emotionally. If the latter, then the campaign runs heavily to irate gentlemen (?) worrying their beards with the aid of cold water or distressed Miss Americas appalled at the very thought of either not being able to shampoo their titian locks without a long wait for the water to heat, or of being forced to do the job with cold water. Imagine the present generation doing either one!

The Favorite Appeals

Health and Beauty are favorite appeal approaches for the makers of heaters. A thousand men and women attending two Home Shows, in Wisconsin Public Service Corp. cities some distance apart, were asked to rate—one, two, three, four, and five in the order of their choice the most important uses of hot water service in their homes. They were given 14 suggestions, chosen from the appeals used by heater advertisers and personal observation. The survey group was a cross-section of all wage levels

Humphrey Heating Headliners



RADIANTFIRES



Radiantfire Circulators

Real Load Builders for LPG

"Acres of diamonds" in your own back yard?—that's true of every LPG company in the nation when sales outlets are considered in terms of Humphrey heating and lighting appliances.

Homes, stores, factories, garages, public buildings—every one is a prospect for one or more of the load builders Humphrey makes. Send today for complete information about these quality appliances for Butane-Propane users.



UNIT HEATERS

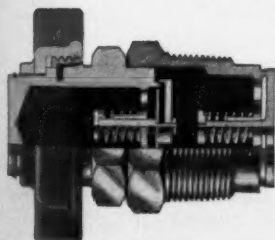


OPALITES

GENERAL GAS LIGHT CO., Kalamazoo, Mich.

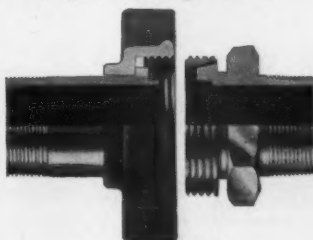
Reduce Filling Time!

Automatic Quick Filler Valves and Connections for Large Butane and Propane Storage Tanks



R-1017 R-2651

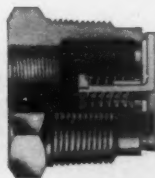
Large Capacity



R-1016 R-1015

Freedom from Leakage

Specifications and Prices on Request



R-2650

Reduce Hazard

L.C. RONEY INC.

1740-44 W. 59th ST. ★ LOS ANGELES, CALIF.

FOR 18 YEARS

MANUFACTURERS AND MARKETERS
OF NATURAL GASOLINE

BUTANE and PROPANE

IN THE MID-CONTINENT
AND GULF COAST AREAS

WARREN

offers a highly trained and experienced personnel, together with the enviable record of 18 years in the production of specialized fuel of the highest quality. Our supply is dependable—our service efficient.

PHONE - WRITE - WIRE

WARREN

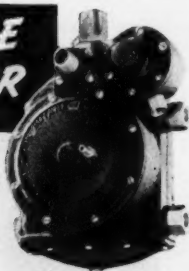
PETROLEUM CORPORATION

TULSA, OKLAHOMA

P. O. Box 1589 • L. D. 321

*The BUTANE
CONVERTER*

*That's
Outstandingly
Superior*



The Dickson Butane Carburetor, unlike ordinary converters, is a compactly designed, trouble-free unit—completely self-contained. By means of Dickson's "unique" vaporizing principle—Butane is efficiently converted from its liquid to a fully dry gasified state.

For Converting
Gasoline-Operated
TRUCKS
TRACTORS
BUSES &
POWER UNITS
to Butane

WRITE TODAY
FOR
FULL DETAILS

DICKSON

BUTANE CARBURETOR

"The Superior Converter for A Super Fuel"

Manufactured & Distributed by PENINSULA BURNER & OIL CO.
1739 Leslie Street, San Mateo, California

and family sizes, each one having paid 10 cents to enter the home show.

The uses for hot water rated in importance as follows, the number of votes each use received being given:

Dish washing	913
Bathing	866
Family laundry	847
Meal making	593
Child cleanliness	490
Hand washing	430
Shaving	404
Special laundering	352
Housecleaning	321
Sick room	262
Floor cleaning	98
Shampooing	72
Beauty	32
Window cleaning	21

As a result of this study the Wisconsin Public Service sales and advertising promotions this year will run heavily to the primary uses of dish washing, bathing, family laundry, and the secondary appeals of meal making, child cleanliness and hand washing. Beauty, housecleaning and window polishing will see little ink.

Costs Figured, Too

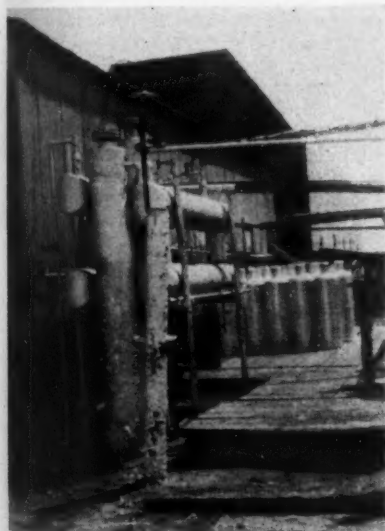
In addition to this inquiry, 1175 people at these same shows were persuaded to tell us what they figured hot water service for a family of four people should cost for one month. Inferentially they were reporting as well what they were willing to pay for such service. The results were inconclusive for any one price bracket, did show an overwhelming expectancy for costs of less than \$2 a month, proved that cost of operation was undoubtedly the greatest single

selling need in the local picture. The accepted average for the two communities varied between \$2 and \$2.25 a month for all families. This table shows that few people paid or expected to pay as much as those amounts:

\$.75 to \$1.00	311
1.05 to 1.25	153
1.30 to 1.50	158
1.55 to 1.75	134
1.80 to 2.00	134
2.05 to 2.25	139
2.30 to 6.00	146

1175

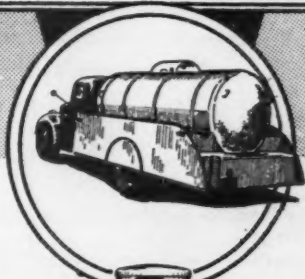
As a whole, the information obtained may be considered reasonably representative for American families.



Dehydrating and filling platform of Cannon Gasoline Co., Amarillo, Texas, showing a few of more than 400 cylinders owned by the company, which has been in the LPG field for five years.

LOOK TO THE *Leader* FOR BETTER TANK *Values*

BUTANE-PROPANE....
★ UNDERGROUND TANKS
★ BULK STORAGE TANKS
★ TRUCK TANKS
★ SKID TANKS



Our tanks are supervised by 20 years' experience in the construction of high grade

designed and men with over 20 years' experience in the construction of containers for pressure fuels.



A. S. M. E. CODE CONSTRUCTION
ECONOMY BUTANE-PROPANE SYSTEMS
are constructed for 100.8 lb., 125 lb., and 175 lb. working pressure for underground use; 200 lb. working pressure for above ground. Approved by Underwriters' Laboratories; Inspected by Ocean Accident & Guarantee Corp., Ltd. Write, Phone or Wire for Details!
"Tanks By Banks"

**DALLAS TANK
AND
WELDING CO., INC.**
201-5 West Commerce Street
DALLAS, TEXAS



Royal Rose Ranges

PAY YOU PROFITS

Royal Rose Ranges are popular priced, sturdily built, beautiful to look at. They will help you sell your gas, as they are a pleasure to use.

J. ROSE & CO. INC.

(ESTABLISHED 1885)

25 W. 29th ST.

NEW YORK

**Here's
the answer
to Winter
Freeze-up
Problems**



PIONEER INSULATED HEAD

with proper size tank to adequately handle the maximum winter load of all connected appliances. Pioneer insulation prevents head freezing... reduces costly service calls... increases customer satisfaction. Write for details of the easy-to-sell, 5-year guaranteed Pioneer Line.

EWING BUTANE GAS CO.
DALLAS, TEXAS

See our exhibit—Texas State Fair—Oct. 5-20

Enid, Okla., Says LPG Must Be Odorized

The city commission of Enid, Okla., has passed an ordinance requiring all gas served to residents of the town to be odorized. This applies to natural gas as well as liquefied petroleum gases.

The ordinance provides that any distributor of LPG must advise in writing all present customers of the malodorant that will be introduced, and that all containers and equipment for the storage or dispensing of the fuel, whether for domestic, commercial or industrial purposes, shall be designed and installed in accordance with the code specifications of the National Board of Fire Underwriters.



Sprague Meter Company Opens Western Branch

The Sprague Meter Co., of Bridgeport, Conn., announces the opening of a new Los Angeles branch and warehouse at 2840 East 11th street. Erected to provide better service for the western states, local officers of the company are inviting inspection of the building which provides 15,000 sq. ft. of floor space, modern office facilities, new designs in proving room equipment and a railroad siding, according to E. H. Roseberry, vice president of the Sprague Meter Co., who is manager of the division.

The Sprague Meter Co. has been on the Pacific Coast for the past 40 years.



Jackson, Calif., Gets Station For Butane-Powered Trucks

A new butane dispensing station has been located at Jackson, Calif., to make the third of such units to supply fuel to the heavy hauling equipment along the Mother Lode highway. It is owned by E. L. Holmes, of Stockton, and is located at Kennedy Flats, opposite the Argonaut hotel. Mr. Holmes also operates another station at Cherokee Lane and Highway 99, near Stockton.

Other Mother Lode butane stations are operated by Hales & Symons at Sonora, and C. A. Simondet at Angel's Camp.

Ewing Butane Gas Co. to Have Exhibit at Texas State Fair

The Ewing Butane Gas Co., Dallas, Texas, has contracted for 340 sq. ft. of exhibit space in the Hall of Agriculture at the State Fair of Texas, which opens Oct. 5 and closes Oct. 20. The Fair attendance often exceeds the million mark.

The Pioneer line of butane gas systems together with various makes of home appliances will be exhibited. The outstanding feature of the Pioneer line is an insulated head for which patent is pending.

Interest in the Ewing Butane Gas Co. exhibit last year was attested by the 26 direct sales made for Pioneer dealers, plus a large list of live prospects.

The company states that improved economic conditions in the Southwest make better results from this year's exhibit a distinct possibility.

A. G. A. Testing Laboratory Engineers Hold Picnic

The A.G.A. Testing Laboratories staff of engineers and office personnel held its thirteenth annual picnic at Pine Ridge Country Club, located near Cleveland on Aug. 16. Approximately 200 persons attended, including the wives and families of the staff members as well as a number of manufacturers who were visiting the Laboratories at the time. It was the largest social affair ever held by the staff.

A buffet dinner, speeches by R. M. Connor, Director, and Eugene D. Milener, and dancing were the evening events.

Green's Fuel Distributors' Convention Starts Oct. 31

The annual convention for distributors of Green's Fuel, Inc., Sarasota, Fla., opens at the home offices on Oct. 31 and will run through Nov. 2.

Invitations are out to prominent men of the industry from many parts of the country to appear upon the program.

At present distributors number 26 and are located in Florida, South Carolina and North Carolina.

**BUILD
YOUR LOAD
ON Experience**

**First PAYNE
L.P.G. Furnaces
Were Installed
in 1928**



In this young industry, few furnace companies can claim a successful L.P.G. installation that is *twelve years old!* Yet, since 1928, PAYNE has sold several hundred L.P.G. furnace installations. ☆ Today every Butane-Propane-fired PAYNE unit is individually checked in the PAYNE Testing Laboratory, and custom-adjusted for local B.t.u. rating and specific gravity. ☆ PAYNE Dealers are generously supported by advertising and sales ammunition...and by experience in Liquefied Petroleum Gases.

PAYNE Dealerships are open in several L. P. G. territories. Write J. H. Keber, Sales Mgr.



- Modern Consoles
- Floor Furnaces
- Duplex Furnaces
- Zoneair Units
- Forced Air Units
- Gravity Furnaces

PAYNEHEAT
Payne FURNACE & SUPPLY CO., INC.
— BEVERLY HILLS • CALIFORNIA —

M McNAMAR

Truck Tanks Transports Skid Tanks Storage Tanks Underground Systems

All tanks inspected by Ocean
Accident & Guarantee Corp., Ltd.

We fabricate to your
individual requirements.

M McNAMAR

BOILER & TANK CO.

TULSA, OKLA.

SALEM, ILL.

AUTOMATIC GAS SHUT-OFF CONTROL Thermocouple Type

WITH FLEXIBLE LEAD CONNECTIONS



General Controls For direct gas line shut-off. Pilot flame applied to thermocouple element makes electrical contact, holding valve open. No outside current is used. Upon pilot flame failure, valve automatically closes. After flame failure, valve must be manually reset. Standard thermocouple length 30". Valve sizes $\frac{3}{8}$ " to $1\frac{1}{2}$ ".

Write for new 1940 Catalog

GENERAL CONTROLS

450 E. Ohio St.
Chicago, Ill.



267 5th Avenue
New York City

Refund Ruling Made By California Authority

The attorney general of California has made a ruling that where butane is bottled in what is designated as a dry valve container, the bottling process, itself, is a use of the butane and therefore a loss in bottling is not a loss precluded from refund under the motor vehicle fuel license act.

A ruling by the State comptroller to protect the State from paying amounts not due provides that bottling losses which may come under this classification can only be paid when the claimant is confining his business exclusively to bottling for domestic use, or when he has a complete separation of tankage and bottling operations for domestic use.

That dealer who both bottles and sells butane for general use is refunded under this ruling only the amount of the actual sales of butane in the dry valve bottles.

Butane used exclusively in trucking operations on public highways does not rate a refund.



Z. T. Caldwell Will Cover Southwest for Crown Stove

Z. T. Caldwell has been appointed district sales manager for Crown Stove Works in Texas, New Mexico, Oklahoma, Kansas, Arkansas, Louisiana, Mississippi and the Western tip of Missouri around Kansas City, according to an announcement from Miss G. Dinelli, of the Chicago office.

Mr. Caldwell has recently been located in Malvern, Ark., as district manager for the company.



Waldo Hoaglund Transferred To Worthington, Minn.

Waldo Hoaglund, manager of the Philgas bulk plant at Pipestone, Minn., has been transferred to the Philgas self-service store in Worthington, Minn.

Before undertaking his new duties, Mr. Hoaglund will spend a week in Waterloo, Iowa, where he will receive special instruction at one of the company's plants.

Ransome Co. Installs Rice Dryer in Katy, Texas

The Ransome Co., Emeryville, Calif., has recently completed the installation of a butane rice dryer in Katy, Texas, for C. B. and Boyce Tucken, according to D. C. Perkins, company engineer, who spent two weeks in the Texas territory in late August and September. This was the fifty-seventh installation of rice dryers of the same type that have been installed by the Ransome Co.

The dryer has two towers, with a capacity of about 150 to 200 sacks per hour. The butane hook-up is direct fired, with automatic controls. The fuel will be supplied by the Ideal Butane Gas Co., of Houston.

The elevator and dryer were installed by H. M. Shonger Co., of San Francisco.

Hopes for Butane Installations On Western Cotton Gins

George F. Weis, formerly with Weis Butane Co., of Wheatley, Ark., is now associated with Butane, Ltd., of Los Angeles. He will act as divisional representative for commercial installations and will cover the Western states for the company.

While in Arkansas Mr. Weis acted as sales manager and had charge of many installations on cotton gins, where butane is now being used extensively for both drying and power. Mr. Weis states that he hopes to make similar installations for cotton growers in the San Joaquin valley and Arizona.

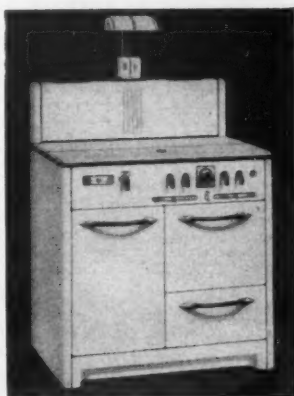
Holicer Gas Co. Moves Offices To Center of Territory

Holicer Gas Co., Inc., recently moved its main office headquarters from Mansfield, La., to 720 Louisiana Ave., Shreveport, La. Offices are now located in Shreveport, Mansfield and Minden.

J. R. Holicer, president of the company, stated that headquarters were transferred so that the principal office might be operated from the center of the territory served. The company operates in seven parishes in Louisiana.

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THE POSITIVE LEAK PREVENTER

Travels 10,000 Miles To Visit System Dealers in Texas

Robert L. Wishard has been appointed field sales representative for Dallas Tank & Welding Co., Inc., according to an announcement of W. W. Banks, president.

Mr. Wishard recently traveled 10,000 miles in calling on dealers in 254 counties in Texas, with the required time for the trip being nine weeks. Thirteen days were needed to call on the dealers in Louisiana with 3000 miles being traveled in that state.

At one time Mr. Wishard was associated with Consumers Butane Gas Co., of Dallas.

Current peak season orders for LPG systems have necessitated putting on a night shift in the newly enlarged plant of the Dallas Tank & Welding Co., Mr. Banks states.



H. E. Felt Heads Butane Sales For Warren Petroleum Co.

H. E. Felt, secretary and treasurer of Warren Petroleum Co., has been made vice president in charge of all butane sales for the company. Associated with him in the butane department are Fred La Fortune, P. J. Hoagland and Harold Mooney.



New Company Will Handle Skelgas in Rushville, Ind.

The distribution of Skelgas in Parke county, Indiana, has been given to the Parke Skelgas & Electric Co., of Rushville. The concern is owned by Paul Lucas and C. H. Vandenberg.

A full line of LPG appliances will be carried.



Williams, Calif., Station Installs Bulk Plant

H. S. Christy, who operates the C. and S. service station in Williams, Calif., has installed a butane bulk plant for the wholesale and retail trade.

The Shell Co. will supply the fuel.

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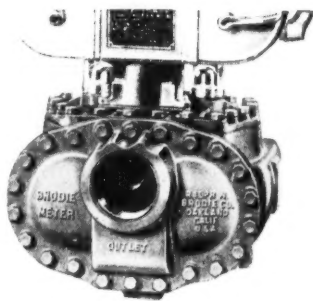
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